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PHOTO - ERA

The American Journal of Photography

AN ILLUSTRATED MONTHLY

OF

PHOTOGRAPHY AND ALLIED ARTS

Volume XXXII

JANUARY, 1914, TO JUNE, 1914, INCLUSIVE

PUBLISHED BY

WILFRED A. FRENCH

383 BOYLSTON STREET, BOSTON, U.S.A.

Index to Volume XXXII

Anderson, A. J. Spontaneous Composition	10
Animals and My Camera, My. Käte Hecht	130
Aroostook, My First Trip to. William E. Clogston	230
Autochrome-Photography, Remarks and Observations on the Practice of. Prof. R. Namias	280
Beardsley, A. H. The Amateur and the Photo-Supply Salesmen	79
The Value of a Snapshot	168
Bonny Little Lass, My. (A Poem.) William Ludlum, Jr.	296
B. Y. M. C. U. Camera Club. F. W. Hill	127
Cadby, Will. Winter-Sports Photography	55
California I Know, The. George R. King	213
Children and the Camera-Habit. Elbert Hubbard	180
Churchill, Allen E. Making Lantern-Slides at Home	65
Claudy, C. H. The Choice and Use of a Miniature Camera. Part I	174
The Choice and Use of a Miniature Camera. Part II	224
The Choice and Use of a Miniature Camera. Part III	274
Clogston, William E. My First Trip to Aroostook	230
Cold Light. Louis Derr	222
Coloring Photographs with Oil-Colors. Lehman Wendell	11
Composition, Spontaneous. A. J. Anderson	10
Cook, David J. The Ideal Portrait-Negative	283
Water for Photographic Purposes	110
Copying Up to Date. E. J. Wall, F.R.P.S.	71
Davis, William S. Spring-Landscapes as Camera-Subjects	169
Derr, Louis. Cold Light	222
Developer for Plates, Films and Papers, One. Phil M. Riley	117
Development of Film-Packs, The. E. L. C. Morse	121
Dimock, Julian A. Camera-Work in Florida	161
Etching in Portrait-Photography. Clara Weisman	292
Faulty Negatives, A Dry Method to Improve. H. A. Stover	289
Figure in Landscape, The. Henry R. Poore, A.N.A.	29
Film-Packs, The Development of. E. L. C. Morse	121
Flashlight-Season, The	125
Florida, Camera-Work in. Julian A. Dimock	161
Group-Portraiture. C. E. Kelsey	23
The Gummist. (A Poem.) Edward H. Weston	182
Haines, F.R.P.S., Robert Thorn. Persistence of Vision and Its Relation to Kinematography	21
Hartmann, Sadakichi. Eugene R. Hutchinson — Professional Pictorialist	267
Hecht, Käte. My Animals and My Camera	130
Hill, F. W., B. Y. M. C. U. Camera Club	127
Hubbard, Elbert. Children and the Camera-Habit	180
Hutchinson — Professional Pictorialist, Eugene R. Sadakichi Hartmann	267
Kelsey, C. E. Group-Portraiture	23
Kinematography. Persistence of Vision and Its Relation to. Robert Thorn Haines, F.R.P.S.	21
King, George R. The California I Know	213
Lantern-Slides at Home, Making. Allen E. Churchill	65
Loehr, Pearl Grace. The Influence of Women in the Photographic Profession	107
Ludlum, Jr., William. My Bonnie Little Lass. (A Poem.)	296
Ludlum, Jr., William. The Road to Yesterday. (A Poem.)	235
Millar, Claude Davis. Old Black Jim	28
Miniature Camera, The Choice and Use of a. Part I. C. H. Claudy	174
The Choice and Use of a. Part II. C. H. Claudy	224
The Choice and Use of a. Part III. C. H. Claudy	274
Morse, E. L. C. The Development of Film-Packs	121
Namias, Prof. R. Remarks and Observations on the Practice of Autochrome Photography	280
Oil-Colors, Coloring Photographs with. Lehman Wendell	11
Old Black Jim. Claude Davis Millar	28
Persistence of Vision and Its Relation to Kinematography. Robert Thorn Haines, F.R.P.S.	21
Photo-Supply Salesmen, The Amateur and the. A. H. Beardsley	79
Poore, A. N. A., Henry R. The Figure in Landscape	29
Portrait-Negative, The Ideal. David J. Cook	283
Portrait-Photography, Etching in. Clara Weisman	292
Riley, Phil M. A Winter Vacation in New Hampshire	3
One Developer for Plates, Films and Papers	117

Road to Yesterday, The. (A Poem.) William Ludlum, Jr.	235
School-Boys' Tour in Europe, American. James R. Starr	16
Snapshot, The Value of a. A. H. Beardsley	168
Spring-Landscapes as Camera-Subjects. William S. Davis	169
Starr, James R. American School-Boys' Tour in Europe	16
Stover, H. A. A Dry Method to Improve Faulty Negatives	289
Wall, F.R.P.S., E. J. Copying Up to Date	71
Weisman, Clara. Etching in Portrait-Photography	292
Wendell, Lehman. Coloring Photographs with Oil-Colors	11
Weston, Edward H. The Gummist. (A Poem.)	182
Winter-Sports Photography. Will Cadby	55
Winter Vacation in New Hampshire, A. Phil M. Riley	3
Women in the Photographic Profession, The Influence of. Pearl Grace Lochr	107

EDITORIAL AND ON THE GROUND-GLASS

Advertising-Methods, Exemplary	E.	134
Advertising, The Latest Fad in	E.	236
American Amateurs Are Asleep	G.G.	252
Athletic Sports, The Camera in	E.	82
Business-Terms, Abbreviated	E.	134
Children, Indifferent Pictures of	G.G.	200
Compliment, A Doubtful	G.G.	44
Correspondence, Perfunctory	G.G.	200
Darkroom-Diversions	G.G.	44
Disease, A New Photographic	G.G.	96
Eyeglasses, Emergency	G.G.	96
Fees for Expert Advice	E.	298
Focusing, Use of the Mirror in	E.	30
Handling the Customer	G.G.	96
He Mistook the Source	G.G.	44
How Was This Picture Made?	G.G.	252
Inconsequential Photography	E.	298
Individuality vs. Technique	E.	82
Mona Lisa Again, The	G.G.	148
Motion-Pictures, The First	G.G.	148
Nature-Photography for Everybody	E.	236
Photomicrography, Art-Forgeries Revealed by	G.G.	148
Please Don't Push	G.G.	200
Portrait-Painters Use Photographs	G.G.	200
Publicity-Act, A Clever	G.G.	96
Stereoscopic Photography	E.	184
Tank, A Triumph for the	G.G.	96
Tariff Misconceptions	E.	184
Tariff on Imported Cameras, The	E.	236
Temple of Childhood Unbends	E.	30
Thrift, Yankee	G.G.	200
Troubles of a Subscription-Clerk	G.G.	44
Undraped Figure, The	G.G.	44
When Money Should Be Returned	G.G.	252

THE ROUND ROBIN GUILD AND THE CRUCIBLE

Aristo Paper Fresh, Keeping	R.R.G.	242
Autochromes from Autochromes	Cru.	201
Bromoil-Printing, A Fixing-Bath for	Cru.	97
Buildings in Busy Streets	R.R.G.	302
Bullets, Photographing	R.R.G.	239
Chapped and Stained Hands	R.R.G.	240
Chloranol as a Developer	Cru.	45
Cleaning Bromide Prints by Toning	R.R.G.	192
Developing-Stains, Removing	R.R.G.	242
Duratol	Cru.	149
Edinol	Cru.	315
Enlarging from Underexposed Negatives	R.R.G.	307
Feeble Image, Working Up a	R.R.G.	190
Fixing-Bath, A Rapid	R.R.G.	190
Flashlights	R.R.G.	136
Foreign Travel	R.R.G.	84
Grain, Rapid Plates and	R.R.G.	245
Green Tones on Bromide Prints	R.R.G.	242

Growing Flowers	R.R.G.	186
Intensifying Thin Negatives	R.R.G.	139
Judging the Negative	R.R.G.	191
Landscapes	R.R.G.	300
Loosening a Tight Stopper	Cru.	97
Mounting Large Prints	R.R.G.	304
Ozobrome with One Bath	Cru.	97
Paper to Use, What	R.R.G.	191
Quinone as a Toning-Agent	R.R.G.	307
Reproductions with the Aid of Blue-Prints, Photographic	Cru.	149
Rodinal	Cru.	201
Rytol	Cru.	253
Screen for All Purposes, One	R.R.G.	304
Self-Toning Paper Precautions	Cru.	315
Shutter-Speeds and Exposures	Cru.	97
Silhouettes	R.R.G.	240
Size of the Image, Varying the	Cru.	315
Slow Plates for Fast Work	R.R.G.	302
Stained and Chapped Hands	R.R.G.	240
Still-Life	R.R.G.	32
Stops or Diaphragms	R.R.G.	305
Strong Prints from Weak Negatives	R.R.G.	303
Telephoto-Work	R.R.G.	239
Toning Prints by Sulphuration	Cru.	253
Two-Focus Lens, The	Cru.	201
Washing-Pan, A Convenient	R.R.G.	189
Washing Roll-Films	R.R.G.	190
What to Take and When to Take It	R.R.G.	243
Whites in Sulphide-Toning, The	R.R.G.	305
Wireless, Photographs Transmitted by	R.R.G.	302
Writing on a Negative	Cru.	45

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JANUARY, 1914

No. 1

PUBLISHED MONTHLY BY WILFRED A. FRENCH, 383 BOYLSTON STREET, BOSTON, U. S. A. Entered as Second-Class Matter June 30, 1908, at the Post-Office, Boston, under the act of March 3, 1879.

YEARLY SUBSCRIPTION-RATES

United States and Mexico, \$1.50 postpaid. Single copy, 15 cents. Foreign subscription, \$2.25 postpaid. Single copy, 1 shilling. Agents for Great Britain, Houghtons, Ltd., London.

ADVERTISING-RATES ON APPLICATION

WILFRED A. FRENCH, Ph.D., Editor; PHIL M. RILEY, Associate Editor
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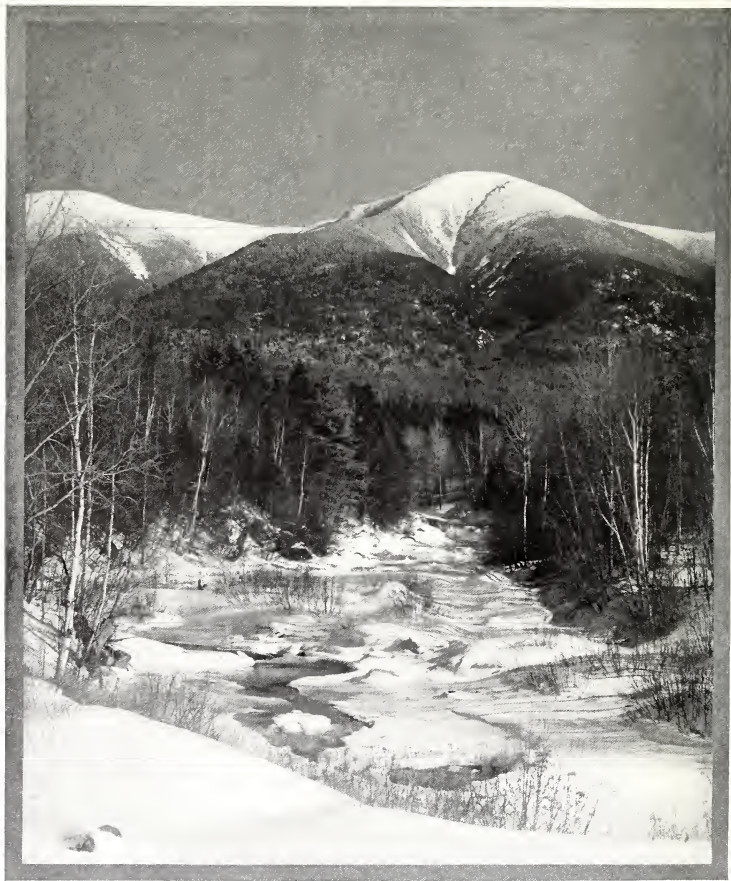
CONTENTS

ILLUSTRATIONS

A Smile from the South	W. H. Partridge	Cover
Mt. Pleasant from Bretton Woods	Walter R. Merryman	2
A Bit of Gossip	Phil M. Riley	3
The Spirit of New Hampshire	Phil M. Riley	5
Tobogganing at North Conway	Walter R. Merryman	6
Washington from Kearsarge	Walter R. Merryman	6
Mt. Washington from Intervale	Walter R. Merryman	7
Winter Sports in New Hampshire	Walter R. Merryman	8
The Camerist's Revel	Phil M. Riley	9
Winter Mist	J. H. Field	11
A Smile from the South	W. H. Partridge	12
The Edge of the Hill	John F. Jones	14
Winter	L. Emmert	15
Four Old Fishermen of Marken, Holland	James R. Starr	16
American School-Boys' Tour in Europe	James R. Starr	17
Dairy of Marie Antoinette	Robert R. Steiger	18
Ready to Ascend the Rigi	Donald McClench	18
Venice from San Giorgio Maggiore	James R. Starr	19
Naples — Street-Scene	James R. Starr	19
Mimna	Anonymous	22
Old Black Jim	Claude Davis Millar	28
Still-Life	Katherine Bingham	32
The Pearl of Orr's Island — First Prize, Shore-Scenes	F. W. Hill	33
Seaward — Second Prize, Shore-Scenes	David Bevan	34
Boys Wading — Third Prize, Shore-Scenes	S. H. Gottscho	35
Noon — Honorable Mention, Shore-Scenes	Bertran Hawley	35
Along the Jersey Coast — Honorable Mention, Shore-Scenes	Richard Pertuch	36
Alameda Marsh — Honorable Mention, Shore-Scenes	Mrs. C. B. Fletcher	36
Eastern Point Light — Honorable Mention, Shore-Scenes	E. B. Hawkes	37
Afternoon on the Coast — Second Prize, Beginners' Contest	L. Vinton Richard	37
A Summer Landscape — First Prize, Beginners' Contest	J. W. Heebner	38
A Summer Morning — Third Prize, Beginners' Contest	H. Gabriel	39

ARTICLES

A Winter Vacation in New Hampshire	Phil M. Riley	3
Spontaneous Composition	A. J. Anderson	10
Coloring Photographs with Oil-Colors	Lehman Wendell	11
American School-Boys' Tour in Europe	James R. Starr	16
Persistence of Vision and Its Relation to Kinematography	Robert Thorn Haines, F.R.P.S.	21
Group-Portraiture. (Illustrations by the Author)	C. E. Kelsey	23
Old Black Jim	Claude Davis Millar	28
The Figure in Landscape	Henry R. Poore, A.N.A.	29



MT. PLEASANT FROM BRETTON WOODS
WALTER R. MERRYMAN



PHOTO-ERA

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A Winter Vacation in New Hampshire

PHIL M. RILEY

A WINTER vacation is the one for me. I have tried both kinds and my choice is made. Like a legion others, the daily routine occupies my mind much and my body little. Recuperation lies in inverting the order. A complete change of scene and occupation is what I crave, and that means outdoor exercise and mental rest.

Summer vacations breed quiet laziness—they literally force it upon you because they are taken during the very hottest weeks of the year. Did you ever try to be very active in outdoor-sports or recreations when it was above 80 degrees in the shade and the humidity was around record-height? That tells the story. If you do not melt in the sun, the mosquitoes devour you when you go into the woods; and every dope I know of is worse than the little pests themselves. The result is one lazy piazza day after another sandwiched between mildly active mornings and evenings.

You have tried all this and know that I am right; but have you tried the winter vacation? Probably not, and it is worthy to be considered. My friend Jim told me all this last summer. It has been his hobby for years, and he is the picture of health—never returns home from his outing more tired than when he went; says that he cannot understand why custom has approved summer as the only proper season for vacations;

also that the day is coming when business-firms will give their employees three weeks' vacation every eighteen months, thereby bringing the vacation in winter every other time. Jim is a puzzle to most people, but not to me; I spent two weeks with him last winter in New Hampshire and I want to again often. I was tired out at the time and my nerves were jumping badly, but I came away fit and ready for work again.

Starting from Boston, our destination was North Conway, one hundred and forty-two miles away, the fare being only a little over \$3.00. An interesting and beautiful ride we found it across the snow-clad country, over ice-bound brooks and along inky-looking rivers, past thriving towns, sleepy little villages, and isolated farmhouses which seemed to be almost deserted except for the little curling smoke-trail from each chimney.

How different the air was when we got down from the railway coach, and how still that little town seemed as soon as the train had gone! Fifty weeks among incessant city noises are more of a strain than you realize. You will understand it, though, whenever the noises are suddenly absent. If you are very nervous, the shock of change may keep you awake a part of the first night or two; but after that you will sleep "like a log." Noise fills our sanitariums and our insane asylums, and the wise vacationist gets far away from it. No



A BIT OF GOSSIP

PHIL M. RILEY

roar of the elevated, no clang and whir of trolleys, no honking of automobile-horns or shrieking of ferry-whistles breaks the peaceful quiet of the snow-covered country — a quiet that is felt in North Conway just as we saw the white-robed hills and smelled the fir-boughs during our rambles outdoors.

All through the mountain-country there are hotels and boarding-houses open the year 'round, so we found accommodations quickly. Average prices are \$6 to \$8 a week at the boarding-houses, and \$10 to \$20 a week at the hotels. There are relatively few guests in winter, and you get better acquainted; all in the house constitute one big, jolly family. On that first night we had a splendid supper of simple but wholesome, well-cooked food, followed by story-telling and apple-eating before a big roaring fire, and finally the best sleep I had enjoyed for many weeks.

Next morning after breakfast I had just settled down for a good quiet smoke, when Jim routed me out with the information that I was not to spend my vacation indoors — not if he knew it! Thus admonished, I made ready to join him, even although I shivered to the very marrow at the thought of it. Had I known that the mercury stood at an even zero outside, I fear that my courage would have failed me.

Under Jim's direction I had taken along a supply of appropriate clothing which we quickly donned. Both had heavy woolen underwear and thin socks over which we pulled heavy lumberman's socks and then our shoe-packs, sometimes called "mocassins." Jim wore heavy trousers with leggings, and two sweaters under his coat, while I had heavy knickerbockers, thick golf-stockings and one heavy sweater. Thus garbed, we pulled down our stocking-caps to protect our ears, put on our mittens and sallied forth. They were not particularly attractive costumes, but our object was purely to keep warm, and in this we certainly succeeded. Doubt it as you may, the fact still remains that not once in the two weeks did we experience any discomfort from the cold.

In the city you shiver, take cold and think you are freezing to death when, for winter temperature, it is still relatively warm; in the country, zero weather and below is bracing and enjoyable if you are properly clothed. This is simply because the air in higher altitudes is dry; the dampness of city-air is what chills. It is always a surprise to learn from experience that overcoats are not needed in the woods and that cold feet are almost unknown.

Throughout the vicinity of North Conway there is intense interest in all sorts of winter-

sports, and it was not many minutes before we had joined a merry tobogganing party and the fun began. The morning seemed to speed away as rapidly as did we again and again down the long incline. Time always passes quickly when you are amused, but we realized that this delightful sport possesses every element of beneficial exercise. The rush of stinging air as you speed downward so rapidly is thrilling and it fills your lungs with the purest of air. With less good luck your eyes, neck and mittens may be filled with snow by an occasional "tipover," but that is part of the fun; besides, the snow, unlike that in the city, is dry and can be brushed away easily. It is on the steep uphill journey that you get exercise; no gymnasium practice this! Enjoyment is urging you on; it is all play, no work and no care.

All too soon it was lunch-time, of which we were appraised by our timepieces and an insistent inward craving. How we did eat! The tonic had begun to work in half a day, beating medicine by at least a week.

That morning was the beginning of one constant round of sport which was not broken for several days. Tobogganing, and coasting with an old-fashioned double-runner gave us good fun at any time, and Jim very patiently devoted several hours each day to the somewhat exasperating task of teaching me that web-footed step required for snowshoeing, much to the amusement of the old hands. I had several "spills" at first, but in a few days could walk quite creditably. This sport is very common in the mountains and skis are occasionally seen, but I did not try them.

As soon as I was able to take long tramps, we made up several congenial parties for snowshoeing through the woods. This was probably as helpful to my run-down condition as anything I did; for there is no place so healthy as outdoors in winter among the pine and fir trees. No tonic can equal in real results the frosty sting of winter air; it spells death for every known germ; few are hardy enough to hold their own and attack man too. This activity in the open soon breaks down all needless tissue in the body and the cold oxygen quickly removes it from the system. A winter vacationist may not return to his desk with blistered, sunburned or brown-tanned arms and face; but his flesh will have a healthy, ruddy glow that denotes plenty of warm red blood, good circulation and deep breathing.

Often upon our return from such trips we would find the younger folks fighting desperately behind snow-forts. Jim is only an overgrown school-boy anyway, and tired as we were he



THE SPIRIT OF NEW HAMPSHIRE

PHIL M. RILEY

would quickly have us taking sides in the fray, usually to be badly worsted by the small boys and have our faces well washed in snow to repay us for our interest. On one occasion the girls fought against us and, much to our dismay, although no chivalrous leniency was intended, put it over us shamefully.

On every trip at least one of us carried a small camera slung over his shoulder, and found plenty of opportunities to use it. An entirely new world seemed spread out before us, clean, white-robed, fragrant and silent, except for the murmur of the wind among the evergreen trees, while on every hand were most wonderful pictures, chiaroscuro effects, and colors, too. Many were the different hues of green on the pines, spruces, firs and hemlocks, some almost black they were so dark, while still clinging to occasional hardwood trees were many frost-turned leaves of light and dark brown. Each kind of tree-trunk was a different color; above was the ever-blue sky in pleasant weather, and blue also was every shadow on the snow. Picture-subjects were everywhere; wood-scenes, mountains, partly-open streams, snow-landscapes, hunters, mountain-climbers, lumbermen, and others enjoying such winter sports as snowshoeing, skiing, coasting, tobogganing, skating and sleighing.

All of these subjects are easily photographed. In pleasant weather the light, although lower than in summer, is rendered very effective by reflection from the white snow which fills so large a part of the picture-space, and the blue shadows are very active. Exposures for two hours in the middle of the day are about the same as in summer, although they increase more rapidly during the early and late hours. For instance, at 9 A.M. and 3 P.M. exposures may well be about four times those required at noon. Above timberline on the mountains there is little danger of undertiming; exposures may often be one-fourth those for the same hour at low altitudes.

Snow-texture and shadow-detail are the qualities to strive for in a winter negative, at the same time being careful not to increase the already-strong contrasts of the subject. These qualities are obtained by careful adjustment of exposure and development, exposing for the shadows and developing for the highlights. By this is meant giving ample exposure for the deepest shadow in which detail is wanted, and then, to prevent too great density of light portions and absence of detail, deciding when to stop development by inspection of the highlights rather than the shadows as is customary. When



TOBOGGGANING AT NORTH CONWAY

WALTER R. MERRYMAN

tank-development is adopted, little if any modification is needed unless it is to shorten the time a trifle. A detailful negative, rather snappy but with no extreme density, is the ideal; a negative in which there is detail and snow-texture in both highlights and shadows. Pyro, ortol, edinol, glycin or a similar, clear-working developer is suitable to use, either in the tray or tank.

Roll or pack films and plates that are orthochromatic and non-halation are all available for winter-photography; anti-screen backed plates are also excellent. With these materials the results ought to be pleasing, although they can be improved by the use of a three-times color-screen placed over the lens, which will filter out the over-active blue-violet light to which plates and films are highly sensitive. A marked improvement in gradation and color-values is seen when a color-screen is used.

To photograph winter-sports is much more difficult because of the rapid movement of persons, animals and other objects involved, and many suppose that the work can be done only with expensive reflecting-cameras, rapid lenses and focal-plane shutters. Such an outfit is necessary if you would be ready for anything this wide and interesting field offers; but a surprising range of subjects may be photographed successfully with an ordinary hand-camera equipment of moderate cost. Of course, the difficulties are to get rapid enough shutter-action to avoid blur, yet to admit to the plate or film within the brief time of exposure enough

light to produce a developable image with sufficient shadow-detail. It is the nearness of the moving object that makes special equipment essential. A small hand-camera, used at a distance which will ensure sharp definition, will yield negatives which, when printed by enlargement on bromide paper, will in turn yield prints that can be trimmed to make the figures seem larger in the picture-space. With any small hand-camera which has a shutter working at $\frac{1}{100}$ second, several of the milder sports may be photographed successfully,

and even some of the more strenuous sports, provided the figures are approaching the camera directly or at an angle of 45 degrees and are not too near. There are moments in most sports when there is relatively little motion, and those moments must be watched for.



WASHINGTON FROM KEARSARGE W.R. MERRYMAN

Very largely in search of photographs, we set aside one whole day for climbing Mt. Kearsarge near by on snowshoes, and found it a much easier and more wonderful pastime than the same climb in summer. Warm work and vigorous exercise it certainly was, and soon our sweaters were tied about our backs and we had even relieved ourselves of other clothing. It is the first man who gets the worst of it; he sinks four or five inches into the snow, if newly fallen, and the girls who follow behind at the end of the file have a hard-trodden trail. Yes, it was pretty strenuous work, and toward the

Quieter than on the way up, the crunch of our snowshoes was interrupted occasionally by animated discussions about the many trails we saw in the snow. To those not thoroughly familiar with woods-lore, there was great fascination in trying to tell if they were made by fox or dog, rabbit or squirrel, partridge or crow. We made much better time down than up, yet our hunger seemed greater, and it was a tired but jolly party that gathered around the table for a very welcome hot supper.

We were contented, indeed, after this strenuous day to smoke quietly before the fire, telling



MT. WASHINGTON FROM INTERVALE

WALTER R. MERRYMAN

end got very tiresome; but all in the party agreed that the delightful views and opportunities for camera-work made it well worth the effort. Never did hearty, simple food or hot coffee from a vacuum bottle taste so good as on Kearsarge at an altitude of 3200 feet with the snow-clad dome of Mt. Washington rising majestically almost twice as high in the distance. Through the clear frosty air we could see for many miles and our binoculars gave us even longer vision. Every one was loath to start on the downward journey, but time passed rapidly and we were finally obliged to do so.

yarns of other climbs and other vacations, and going to bed early; although on other nights we had been more ambitious. Several times we had been snowshoeing or tobogganing by moonlight, or watched the weird effect of a great log-fire in the woods.

On another day we made up a sleighing-party for a glorious drive up through the famous Crawford Notch to Fabyan's, where we dined within sight of the Presidential Range in all the beauty of its wonderful winter-dress.

Still another day was given to visiting a lumber-camp in the woods. In these camps are to



WINTER SPORTS IN NEW HAMPSHIRE

WALTER R. MERRYMAN

Left to right: "Grown-Ups in a Snow-Battle;" "Tobogganing on the Crust;" "Lunch on Mt. Kearsarge;" "Moat Mt. and the Saco Valley from the Slopes of Mt. Kearsarge;" "Through the Crawford Notch on Snow-Shoes;" "The Start to Climb Mt. Kearsarge;" "Walking Up the Toboggan-Slide."



THE CAMERIST'S REVEL

PHIL M. RILEY

be found a few lonesome Americans, associated for the most part only with uneducated Canadians, and glad to meet an occasional visitor from the outside world. It is an interesting trip to go into one of these lumber-camps, to watch the operations, and have a hearty dinner of pork and beans. Although this menu may not sound especially tempting to the city man, particularly to a man from Boston where beans are supposed to be at their best, still a ten-mile tramp in the frosty air will make it seem delightful, and things in the woods always have a delicious flavor all their own.

All too quickly the care-free days sped by and our vacation was nearing its close. Jim wanted me to stay another week for some hunting, but my plans would not permit. Had it been possible, we would have found game in plenty. It is not legal to shoot all sorts of game in winter, but enough are exempt to make the sport good. The guides who charge \$3.00 a day when the autumn-season is at its height, will gladly take you in winter for half that price and will give you more information, too.

Deer may be hunted the first fifteen days of December in all counties except Coos, whereas in Grafton and Carrol Counties the season includes November also. Here rifles are permitted, although elsewhere shotguns loaded with

single ball or loose buckshot must be used. Dogs, jacks and traps are prohibited, and one man is allowed to shoot only two deer. From October to January 1 is the open season for raccoon, and until April 1 for rabbits and hares. Sable, otter and fisher may be taken between October 15 and March 31. A hunter's license, issued by the Fish and Game Commission and costing \$10, is required, and trapping is illegal except with the consent of the landowner. At the present time the pelts of fur-bearing animals bring such good prices that a successful hunting-vacation is likely to pay for itself handsomely.

Campton, Thornton, North Woodstock, Bartlett and Warren, near the slopes of Mt. Moosilauke, in the nearby town of Benton, are good points to start from. If the trip is particularly for hunting and trapping, a guide will probably take you to a camp in the woods; otherwise, hotel-accommodations can be had at the places named for \$6 to \$15 a week. The average distance from Boston is about 150 miles, and the railway fare about \$3.40.

Since I could not spare the time for any gunning, Jim and I agreed to have a little fishing before our return. In winter the disciples of Izaak Walton may not have the supreme pleasure to cast a fly with one hand and kill a mos-

quito with the other, but they can fish all the same, and much more comfortably if warmly clothed. Fishing through the ice is a good healthful recreation, providing the element of chance so much loved by the entire human race, and a little mild excitement mixed with plenty of crisp winter air.

Of fish there is a plenty; trout, white-fish, shad, bluefins, pickerel, pike or grayling — all have an open season in winter. Land-locked salmon may not be taken through the ice. You can bob for trout or set lines with live bait for whitefish, shad and bluefins after January 1, until the ice goes out, except that in Newfound Lake the winter trout season is during the month of January only. The ordinary open season for pickerel, pike or grayling is all winter, until January 15. Pickerel may be taken in Lake Sunapee at any time, and in Winnepesaukee, Winnisquam and Squam all winter, until March 31. In no kind of fishing may one person set more than ten lines and these are a plenty to look after properly.

Five lakes in central New Hampshire furnish excellent opportunities for this sort of sport. Each made its own strong appeal to us, and we found it difficult to choose, as each offered good fishing and comfortable stopping-places. We finally chose Winnepesaukee, the largest lake in the state, with its many islands, distant views of the White Mountains and nearby sentinel peaks — Belknap, Ossipee and Major.

It is probable that more fishing is done on Winnepesaukee than elsewhere, not only because the fishing is good, but because of the unusual conveniences provided. The railroad follows the south shore closely all the way from Laconia

to Alton Bay, and gives frequent service, so that fishermen who do not hire camps for a long stay can stop at either of these places and go quickly by train to their starting-point on the lake.

Taking a train to Wolfboro, we got a liveryman to drive us across the lake to Spring Haven, where we again took train to Laconia. With this as our stopping-place, it did not take us long to find a man who knew just where the fish were biting, and next day we started down the lake on the morning-train to make a day of it. The mile between Glendale station and the fishing-ground we made quickly on our skates. Two days we spent fishing, one bobbing for trout behind a windshield of boughs, the other fishing with set lines; and good sport we found them both.

Both Jim and I longed for one day more; but that was impossible. The good work had been accomplished, all the same, and I was in better trim than I ever had been after a vacation. As we reluctantly started for the evening-train back to Boston, Jim looked me over critically and offered congratulations upon my fine appearance.

"You're the doctor, old man," I replied, grasping his hand warmly; and he really was.

While this happens to be the story of a New Hampshire vacation, the facts are quite as applicable to Maine, Vermont, New York, Pennsylvania, Michigan, Wisconsin, Minnesota and several provinces of Canada. Every one of them has its winter-resorts. Go to them and you will have a novel and beneficial vacation, and you will obtain many unique and pleasing photographs.

Spontaneous Composition

A. J. ANDERSON

PHOTOGRAPHIC composition falls into two distinct classes: arrangement and selection. The former class includes portraiture, still-life, and such subjects as can be arranged by the photographer himself; and in this class the composition of the photographer is almost, or quite, as much a personal matter as the composition of the painter. The latter class comprises landscape, seascape, architecture, and, I think, genre work; in this class the composition is mainly the selection of the artistic arrangement by an artistic mind. But, so far as the artistic merit is concerned, I cannot think that selection is inferior to arrangement.

An artist selects a sympathetic model, and tells her to pose herself whilst he prepares his palette. He finds the pose absolutely ideal, and paints the girl exactly as she has flung herself — every single item of the arrangement happens to fall right, and the artist paints the subject exactly as it stands: there is no arrangement in the composition, only selection or appreciation. A lesser or meaner man would have altered the pose slightly, so that he might lay claim to the composition; but the true artist who aims at perfection paints perfection when he finds it.

The A B C of Artistic Photography.



WINTER MIST

J. H. FIELD

Coloring Photographs with Oil-Colors

LEHMAN WENDELL

THERE is an irresistible appeal in color, a universal appeal that has existed at all times. It manifests itself early in childhood and we see it exhibited by savage as well as civilized man. The love of color is a part of our nature as much as our love for music or poetry or any of the kindred arts. We love the sunlit meadow with its vivid greens and yellows and browns; we love the blue of the sky and the reds of the setting sun; we love the variegated flowers of the fields; and the wonderful colors of the ocean are a source of constant pleasure and satisfaction.

No artist-photographer is long satisfied with a picture in monochrome, and sooner or later he ends by endeavoring to reproduce his artistic conceptions in color. At first he is satisfied with a single tone—a suggestion of color—and he tones his prints sepia. His next step is to try the blue and the green toners, and later he will perhaps combine several tones, using the

brush-method for this purpose. Having reached this last stage, he begins to realize that the full colors of nature are often necessary to reveal the beauties of a portrait or of a landscape, and he provides himself with a set of colors. If he be already a colorist, he will meet with speedy and certain success; but if he be a novice, he will encounter many pitfalls and discouragements. He tries one make of colors after another, buys brushes by the dozen, instruction-books by the score, and finally he arrives at the conclusion that coloring is an art in itself—but a most fascinating art.

There is a variety of transparent colors on the market intended for tinting photographs, but few of these are to be recommended. Nearly all of the liquid colors are unsatisfactory and many of the solid colors are worthless. Practically all of them are of such a chemical composition that, when applied, they sink into the gelatine, and thereby render corrections



A SMILE FROM THE SOUTH
W. H. PARTRIDGE



impossible. Hence, if a wrong color be applied, it must remain. Still another objection is that the transparent colors dry with a decreasing brilliancy, and to overcome this the picture must be painted in a high key, thus allowing for the lowering of tone. This, as every colorist knows, is a difficult thing to do. Still another objection is that it is extremely difficult to cover large areas uniformly. These are not all the objections, but it is needless to enumerate more at this time.

The idea of using artist's oil-colors for tinting photographs is not a new one, and yet it has been so little exploited that to most photographers it will come as a surprise. The advantages of oil-colors are almost too numerous to mention. The ease and certainty with which they can be applied makes them ideal for this kind of work. Large surfaces, such as the sky, can be covered with a uniform tone and no muddy, streaky spots will result, as is often the case with other colors. The colors, upon drying, do not decrease in brilliancy and so the picture can be colored in the correct key. Still another advantage — and it is a big one — is that the colors can be made transparent or opaque at will, making it possible to correct faulty effects in light and shade. For example, a clump of bushes may appear so dark in a landscape that the aerial perspective of the composition is upset. With transparent colors it would be impossible to correct this fault; in fact, the colors would be likely not to show at all. If oil-colors be employed, however, they can be made slightly opaque and the dark mass of bushes can be toned down until it takes its proper place in the composition.

Now a word as to the materials needed. The outfit, which is a simple one, consists of paints, vehicle or thinning-medium (poppy-oil and turpentine mixed in equal proportions), several sable-hair brushes for detail-work, toothpicks and absorbent cotton. A small porcelain palette may be added for mixing the colors, but a white card-board will serve the purpose quite as well.

As to the choice of colors, much might be said, for the subject is a broad one. There are hundreds of colors of every conceivable tint and shade; there are colors that cost but a nickel, while others cost seven or eight dollars; there are colors that will undergo a chemical change in a day or two, while others will remain permanent almost for all time to come. It is therefore imperative that one exercise a great deal of care in selecting the colors. Theoretically only the three primary colors — red, yellow and blue — are required (the others being gotten by a mixture of these), but in practice it is well

to add a few others. The following palette of colors will be found excellent:

(Yellow) Italian Pink
(Red) Crimson Lake
(Blue) Permanent Blue
Burnt Sienna
White
Ivory Black

When you have become accustomed to the handling of these colors you may add any, or all, of the following: Pale Lemon Yellow, Naples Yellow, Chrome Deep (a fine Orange Yellow), Prussian Blue, Chrome Green, Cinnabar Green Middle, Emerald Green, Vandyke Brown, Neutral Tint (excellent for shading clouds). The greens listed are particularly fine for landscape-work.

The outfit still lacks brushes. If desirable these may be made by taking a small tuft of cotton, placing it on the end of a toothpick and giving the latter a few twirls. The cotton will adhere firmly and you will have a tiny swab which will make an excellent brush. Make about half a dozen such swabs, some larger, some smaller. For covering large surfaces, a tuft of cotton held between the fingers will prove satisfactory. Of course, sable-hair brushes are superior to those of home manufacture. They are also so soft that the strokes do not show and it is possible to make a wide stroke or the finest kind of a line at will.

Regarding the actual coloring of the photograph, details cannot be given here. So many things must be taken into consideration when dealing with color that to cover the subject with any degree of completeness would require an entire issue of PHOTO-ERA. However, the following quotations from an old note-book, which the writer compiled several years ago when he was a student at the Chicago Art Institute, may be of service. These notes are intended merely as hints to put the colorist on the right track. For detailed information a text-book on the theory of color should be referred to. There are many such books to be had, and they are interesting as well as instructive.

Color-Notes

The luminosity of a hue depends upon how much yellow it contains; hence, a sunlit meadow shows yellow rather than green grass.

White is always bad and should be avoided as much as possible. In painting a collar and a shirt-front, for example, use a light yellow-green. Pure white, as well as pure black, are so seldom found in nature that they can almost



THE EDGE OF THE HILL

JOHN F. JONES

be said not to exist at all. The amateur photographer, whose pictures, as a rule, show such glaring whites and intense blacks, should bear this well in mind. Use a soft paper, and avoid the abominable glossy variety.

Red, yellow and orange are known as warm colors; violet, green and blue as cold colors. The warm colors seem to approach or advance; in other words, they force themselves upon the attention. Because of this they are known as the vulgar colors. Blue, green and violet seem to recede, and are therefore known as the refined colors. Red is the most positive color, blue the most negative. Since red is the most positive color, it must be placed near the center; if not, the attention will be drawn too much toward the frame. There is less red found in nature than any other hue.

When dealing with color we find that some colors are more readily seen than others. To illustrate: if we look steadily at a point about eight inches from the face and then slowly bring something red towards the spot, we shall find that the color cannot be distinguished until

it is about eight or ten inches from the spot. Yellow, on the other hand, can be seen several feet away. This gives rise to the following rule: Avoid bringing red very far from the center of the picture. Yellow may be placed farther away from the center, white may be extended still farther, and black the farthest.

The intensity of a color decreases as it recedes. For example, if we were to look at two rows of posts, one row being white and the other black, we would find that the white posts would become grayer and grayer until in the distance they would be a middle-gray, and the black posts would also become grayer and grayer until in the distance they would be a middle-gray.

Distance adds blue to all objects. When the atmosphere is perfectly clear, as it is in mountainous regions, then the shadows cast by objects will appear to be a solid mass of blue. To make this clear, let Fig. 1 represent a rock on the side of a mountain. The blue shadow will appear to fill the whole intervening space with a solid blue.



WINTER

L. EMMERT

Warm colors are best to use as figures on a cool ground. In nature this is strikingly exemplified in the cool-colored grass and foliage in which often is found warm-colored flowers and the brilliant plumage of birds.

The moon can never be painted in its true value because it is so bright that it comes toward you more than any other object in the picture. To make it take its proper place, either paint something contrasting near it or paint it in a cold color, pale-green, for example.

Purple is known as nature's color. It is very much in evidence in the early morning and in the evening. If a small cloud cover the disc of the sun, the shadow cast on the yellowish grass will be purple. All yellow lights, both natural and artificial, cast purple shadows.

The blue of the sky never affects any of the colors on the earth. Do not confuse this with reflection. All polished surfaces act as reflectors and are influenced in color by neighboring

objects. This relation is a very important thing and should never be lost sight of, for it may lead to an infinite variety of effects.

A wet pavement mirrors the sky and to the trained eye it often takes on a decided bluish hue. Under certain conditions the glistening rails of a railway are an intense ultramarine blue. Water is always more or less of a perfect reflecting-surface and is strongly influenced by the reflections of the sky on its surface. The sky color is always modifying the water. Sometimes the water is a perfect mirror; sometimes the mirror-quality

is almost lost, but the influence is there. Remember, however, that not only that portion of the sky is reflected which is directly over the reflecting-surface. It is evident therefore — since the blue of the sky is always more intense directly overhead than it is at the horizon — that the water which reflects the sky must be painted much bluer than the sky. Neglect of this fact is a common error.



FIGURE I



FOUR OLD FISHERMEN OF MARKEN, HOLLAND

JAMES R. STARR

American School-Boys' Tour in Europe

JAMES R. STARR

LAST summer I had the pleasure to go on the American School-Boys' European Tour, the itinerary of which included visits to the noted schools and universities in England and trips through Holland, France, Germany, Switzerland and Italy. After looking around and trying several small hand-cameras, I decided that for a trip of this kind a regular 3A Kodak fitted with an Autotime shutter, which takes a picture of postcard size, would be the most suitable instrument for an amateur, like myself. I decided, too, that, to get the full use of a camera, it must be small enough, and light enough, to be carried in the hand or over the shoulder without any discomfort to the traveler. If the camera is cumbersome or heavy, it is likely to be left in the suit-case when one is traveling or sight-seeing. I know that if my camera had not been so light and small, I should have been tempted to leave it behind on some of the side-trips; as it was, I grew so attached to my camera that, whenever I was separated from it, I felt as if I were not completely dressed.

As I was about to start on my trip, I inquired of people who had traveled in Europe, if I should buy all my films in this country. Every

one told me to carry only enough films to last me during the trip across the ocean, as I would have no trouble to buy American films in any city or small town in Europe. I afterwards found this to be true. I also discovered that if one intends to take many pictures, it is best to buy American films, as one is not likely to be troubled by the United States custom-officers on returning home. Film-cartridges should be handled carefully. After the film-cartridge has been exposed, I always wrapped it in paraffined paper, sealed it and placed it back in the box. This will protect it from moisture in the atmosphere or moisture in the suit-case or trunk caused by damp clothes and toilet-articles. These films should be packed so that there is no pressure on them and so that they cannot slide around in traveling. If they do slide around, it may rub the films and cause fine lines to appear in the picture. After having a few rolls of films developed on the first part of the trip, I concluded that it was too expensive and that I was running a risk in having work done in some places. I don't mean to insinuate that European photo-finishers are not as good as the American photo-finishers. There are many photographic shops which are not reliable, and





DAIRY OF MARIE ANTOINETTE

ROBERT R. STEIGER

if the traveler is a stranger he may get dishonest treatment in such places.

Another thing that I discovered is that, on a European trip, a camera may get out of order. I found that, while traveling on the ocean, or in Scotland or in England, my shutter would often work slower than it should. This was no fault of the manufacturer, but the result of the damp, foggy atmosphere which corroded the little piston in the shutter and caused it to work hard. When this occurred, all that was necessary to put the shutter in order again was to unscrew the little cap on top of the piston, take out the piston and wipe it carefully and the cylinder in which it moves with a piece of soft chamois-skin. If it still worked hard, I wiped the piston with a little jeweler's oil on a cloth. The lens should be watched also, as it will sometimes fog during cold, damp weather. I found it a good plan to have a roll of films developed once in a while to make sure that I was obtaining satisfactory results.

As the amount of money which I could afford to spend in taking pictures was limited, I did not use my camera as a mere recording machine for views of things which I had seen. I think this is the mistake many tourists make in

taking pictures abroad. Generally, I made it a point never to take a picture, if, for two or three pennies, I could purchase the same view on a postcard or in a pamphlet. I was also careful not to take pictures which did not show that they were foreign views. For example, if I took a picture up in the hills of Scotland, I would try to get into part of the view a Scottish cottage or garden or some Scottish peasants. Otherwise the

view would resemble American hills. My favorite pictures are those which typify the people of the old world, their homes, ways of living and customs. In England and Scotland there are the old castles, country-homes and famous gardens, which make fine subjects for artistic pictures. In Holland there are the Dutch wind-mills and quaint little fishing-hamlets. Switzerland is the land for mountain-views. Italy, on account of its clear weather, is a paradise for the photographer. There are the Venetian scenes, old Roman ruins in and near Rome, marine-scenes along the bay of Naples and around the Island of Capri, and interesting scenes of street-life in the city of Naples. In taking pictures, I always tried to get away from touring parties or a group of



READY TO ASCEND THE RIGI

DONALD MCCLENCH



VENICE FROM SAN GIORGIO MAGGIORE
NAPLES — STREET-SCENE
JAMES R. STARR



people who are taking pictures, as they attract the attention of the people in the scene, causing them to turn around and look towards the camera or spoil the effect of the picture by posing.

The first thing I would do when I reached a city or town, where I intended to spend several days, would be to look over the place and determine what I wanted to take and when would be the best time to take the picture. For example, there might be some building which is so situated that in the morning it would be partly shaded by an adjoining building; but in the afternoon the light would be just right for a picture. In the city of Florence, for instance, I discovered that from the top of a hill, between the hours of one and three o'clock in the afternoon, I could get a good picture of the city. During my trip I was very careful not to take pictures before ten o'clock in the morning and after four o'clock in the afternoon. For general views under good climatic conditions I set the diaphragm at $F/8$ and the shutter at $1/25$ second. For distant views of cities, mountains, or coast-scenes I set the diaphragm between $F/32$ and $F/64$, and gave the picture an exposure from one to three seconds depending on the light.

Whenever I took a picture, I tried to have pictorial arrangement and used my view-finder to advantage. I think that, in taking pictures, too many people use the finder simply as an instrument to ascertain whether the horizon is parallel to the bottom of the glass in the finder, or whether the side of a building is perpendicular to the bottom of the glass in the finder. When I approach an object which I think will make a good photograph, the first thing I do is to open the finder. From the moment I look into the finder, I do not glance up until I have found the right position from which to take the picture. If one will only put more faith in his finder and not so much on the ability of his eye to find the right location from which to take a picture, I am sure one would have better pictorial arrangement. Of course, my camera was not arranged so that in pointing up towards a high building the vertical lines would remain plumb in the picture. For that reason, I never tried to include too much of a tall building at close range; but raised the lens (which can slide up and down on two parallel posts) as far as it would go, and raised the camera the least bit, and got what I wanted, although, to be sure, the lines in some cases would incline a little toward the center of the picture. On several occasions, when it was convenient, I would obtain a picture of a tall structure from

the window of the second story of a nearby building, and in this way obtain a picture architecturally true, as in the view of the University of Heidelberg.

[The writer, James R. Starr, was a member of a party of about one hundred boys, selected from prominent preparatory schools in the United States, which was taken to Europe last summer under the auspices of a well-known American travel-company. The particulars appeared in December PHOTO-ERA, 1913. The boys were under the immediate charge of instructors representing these different schools, and the whole party was managed by two conductors from the Boston office of the travel-company. Having arrived at Liverpool, the party went direct to Glasgow, where the tour, which lasted sixty-four days, was really begun. Fifty of the boys carried cameras, and their rivalry and success was such that, on their return home, a prize-competition was held. The result of this contest, with full particulars, was published in the preceding issue of PHOTO-ERA. James R. Starr won the first prize in both classes of this interesting competition. The other prize-winners were Robert Steiger and Donald McClench, also members of the above-mentioned party. — *Editor.*]

The Photographer

FAITHFUL to life! Though working with negatives, he has strong faith in affirmative results. He looks through the camera and sees shadows, and by secret of skill dispels them with "high-lights." He finds in the "dark-room" the pleasures of hope and, in the sun-brightened studio, the delights of labor.

In art, he is the schoolmaster, and teaches perseverance by "retouching." He creates upon opaque glass a silhouette and then, by aid of sunlight, gives a "proof" of his artistic genius. He courts the charming, sympathizes with the unattractive and falls in love with beautiful creations.

Other professions have their "fine lines," but the photographer stands alone as the "picture" historian of passing life. He tells, in a reflective and silent way, of the singular attractiveness of babyhood; of the rapture and buoyancy of youth; and records, as with a pencil, the tender and pathetic story of old age.

Louis Varnum Wolfe.



MAN'S highest ideal should be to have a part in the advancement of his chosen work.

W. H. Porterfield.

Persistence of Vision and Its Relation to Kinematography

ROBERT THORN HAINES, F.R.P.S.

THE theory of persistence of vision has been so long established, and the effects believed to be caused by the continuation of light on the retina of the eye have become so well known and recognized, that it would require more than ordinary courage for anyone now to question its truth, or attempt to cast any doubt, whatever, on its reliability to produce those effects.

According to the accepted doctrine of persistence, light reflected from objects and transmitted to our eyes, continues to be visible to us through the medium of our consciousness for a definite period after the objects cease to reflect the light, and the duration of that period varies according to its intensity and color.

When a burning stick is caused to move quickly to and fro, or to travel rapidly in the path of a circle, there is not to be seen a series of short light and dark sections alternating with each other in rapid succession, but what appears to the eye is a complete continuous band or circle of light, and this phenomenon is accounted for by the supposition that the light continues to be visible at every point in the path over which it has traveled until it again returns to each of those respective points. On this theory the principle of the kinematograph and a great variety of other devices is supposed to be based, and it still remains to be proved that the theory is unfounded and that the results obtained are not due to that but to some other cause.

During the course of my early experiments I found that, when the speed of the successive pictures, alternating with the dark intervals caused by the shutter obscuring the light, far exceeded the period fixed as the duration of persistence, the picture did not appear continuous as would naturally be expected if the fixed period of duration were correct; but the dark intervals distinctly appeared after each picture was exhibited, and the light did not persist over those intervals — as the theory supposed it would do. This apparent error, or discrepancy, at first caused me to doubt the persistence theory, and led me to an investigation as to the reason that a burning stick, moving at a speed within the persistence limit, appeared as a continuous evenly-illuminated band; whereas pictures translated at the same speed distinctly showed the dark intervals. It was

reasonable to suppose, on the assumption that the theory was correct, that where the light persisted in the case of the stick it should in like manner also persist where the pictures were concerned, providing that the conditions in both cases were identical.

As the result of my investigations, I found that the apparent inconsistency was an insufficient ground for upsetting the theory, since there was a material difference in effect between a light continually visible to the eye, but only changing its position, and a light alternately appearing and disappearing. The apparent inconsistency was due to the fact that the pictures appeared and disappeared suddenly while the eye rested on one spot, whereas the burning stick was always gradually receding from the position it had just passed over, and approaching the fresh section which it was about to traverse; and that at no period of time was the glow of the stick absent from the sight, but always appeared in full brilliancy at some point in its path. This fully accounted for the apparent discrepancy in the theory and explained why, in order to obtain continuity, the alternations should be much more rapid in the changing of the pictures than in the movement of the stick. Experiments further proved that where the light was entirely cut off during the translation of each picture, a speed of fifty alternations of light and darkness per second rendered the dark intervals almost imperceptible, a very high speed failed to make the light appear absolutely even and continuous.

The shutter now used in the kinematograph, having three equal blades with a corresponding number of equal intervening spaces, increases the speed of alternation to forty-eight per second when sixteen pictures per second are shown, and by that means the dark intervals are reduced; but the light also is reduced to half its intensity. One blade covers the picture during translation, and the remaining two pass over it while the film stands still. To this form of shutter must be accredited the reduction of flicker which has been made in recent years; but even with this expedient, in pictures that are not dense and those with clear bright patches or brilliant skies, the flicker is still very noticeable and a strain upon the eyes.

The best means to minimize it when a shutter is employed, is to reduce the dark inter-

vals to the greatest extent. If a half disc shutter (one blade) be rotated forty-eight times, alternately covering and uncovering that number of pictures per second, the same result would be obtained as by splitting up that half disc into three parts and covering and uncovering sixteen pictures in the same time. The reason for this is obvious; the same number of alternations of light and darkness takes place with the three-blade shutter as with the one-blade, viz., forty-eight, and each alternate period of illumination and obscurity is of the same duration in both shutters—that is to say, that the one blade rotating three times the speed cuts off exactly the same light as each of the three blades rota-



MINNA

ANONYMOUS

ting one-third. It is three times the area and travels three times as fast.

After all, it must be admitted that these expedients, introducing other disadvantages and increasing the cost of working, are only artificial means of minimizing or concealing the flicker which should be obviated in the proper natural way by making the illumination and picture continuous. The question as to whether the theory of persistence is correct or not would appear to have no bearing on the problem of flicker. The dark intervals exist, and it is only by making the illumination absolutely continuous that they can ever be entirely eliminated.

If the apparent continuation of the light, effected by the rapid movement of the stick, could be satisfactorily accounted for independent of persistence, that theory being no longer necessary to explain the visible phenomenon could obviously be dispensed with. Let us see what happens! The burning stick, commencing at its period of rest, moves slowly at first and the light is seen to pass to and fro, while the outline of the stick is clearly distinguishable. As its speed gradually increases, its outline becomes more indistinct until, at last, a speed-limit is attained when the light appears to extend across the entire length of its path, and the eye completely fails to distinguish at any point any difference in the illumination. What would we expect to see, other than we do see, if there were no persistence and the light should entirely cease to be visible at the instant of its removal? Certainly not the light alternating with darkness, and that is the only appearance that it would be remotely possible to imagine might be seen, or is within the power of our conception. It could scarcely be doubted that there must be a limit to human perception, and it should not be deemed unreasonable to fix that limit at the point where the speed is such that the mind fails to conceive any variation in the intensity of the light at any point in its path. This failure to conceive the possibility to see in the absence of persistence any appearance other than is visible, combined with the probability that the limit to our perceptions may be fixed at the speed where we fail to detect any intervals that may exist, amounts to almost positive proof that the theory of persistence of vision is not tenable, and that the light in reality does not persist.



Gradations in Pictorial Photography

As far as the quality of tone-rendering is concerned, photography is an exceedingly plastic medium; for within certain limitations, and without interfering with the purity of the tone-work, the gradations may be placed almost exactly where the photographer wants them. The scale of gradations may be condensed into a very few tones, or it may be expanded to its full limit; the delicacy of the higher tones may be brought out whilst the shadows are simplified; the depth and richness of the low tones may be accentuated, whilst the high tones are rendered in a few tints of gray; the picture may be printed in either a high or a low key. All this may be effected simply by exposure, development and printing, without interfering with the purity of the medium. — *A. J. Anderson.*



"NOW DON'T MOVE!"

C. E. KELSEY

Group-Portraiture

C. E. KELSEY

NOW that summer is over, we shall have to confine ourselves more than ever to work that can be done indoors, and of all indoor-work there is nothing more interesting than the making of portraits of our friends, either singly or in group. Not only is there a large degree of pleasure in the making of group-portraits, but also it affords plenty of opportunity for the display of all our ingenuity and photographic ability. No two situations or groups of subjects will be the same, and the degree of our success will lie largely in our

ability to adapt ourselves to conditions that arise on the moment and to take advantage of them quickly.

As in all other lines of photography, the making of group-portraits is not dependent upon an elaborate outfit. Personally, in this work, I use almost altogether a No. 3 Kodak, fitted with Zeiss-Kodak lens and Compound Shutter. This I find a very satisfactory camera for indoor-work. Being small it is easy to handle, and with the metal tripod is quickly set up and easily moved from place to place. Further, there are



CHILDHOOD HOURS
"YOUR TEDDY AND MINE"
C. E. KELSEY





"SMELL!"
CURIOSITY
C. E. KELSEY



no plate-holders and slides to bother with. Then, by using a steel tape to measure distances, the inconvenience and attending troubles of focusing are done away with, and this all helps in making for quickness and eliminating the difficulty of accurate focusing on dark interiors.

As part of my equipment I always include a strong, pocket magnifying-glass, which, held over the finder, gives an image nearly the full size of the finished print, and so enables one to watch expressions and make the exposure at the proper moment. To a certain degree it turns a little Kodak into a Graflex, for a picture always looks different through the eye of the lens than it does to one standing beside the camera. Naturalness being one of the chief ends striven for in the making of group-portraits, the small Kodak with its metal tripod is far from an awe-inspiring object and in the majority of cases turns the task into a play-spell for all—a fact which often counts very materially in the results. Recently I had occasion to photograph some children, after the professional photographer with his large plate-camera, tripod and focusing-cloth had failed lamentably. When I entered the home with only the Kodak slung over my shoulder I was asked why I had failed to bring my camera, and they gave me a very skeptical look when I pointed to the small black case. Results count, and an order for two dozen enlargements and some five dozen small prints testify to the degree in which the little Kodak made good.

As in all photography, lighting is the first problem to be worked out. We should strive to have the light as strong as possible in order to reduce the time of exposure, thus reducing to a minimum the possible loss of a negative through the movement of some member of the



WHEN THREE IS NO CROWD

C. E. KELSEY

more than two it is generally better to get further into the room and have the lightings more diffused so that it will be more nearly equal over the group. Otherwise, it is difficult to get an exposure that will be even throughout the entire negative. In the majority of cases it is better to work with the simple, natural lighting so the resulting print will have a more "homey" and every-day appearance. While some fancy lighting-effects are very "stunty," yet they have not the wearing-qualities of the more natural lighting. Often it is possible to use two windows to excellent advantage, as is shown in the accompanying diagram: A being the one used in making the portrait, "When Three Is No Crowd."

If possible, strive to have the background in tone with the group and suggesting natural surroundings. However, if this cannot be arranged artistically, by all means use a background of some description. A large screen, over which can be draped some light-colored material or other hanging, will be found very helpful. If the proper background cannot be provided easily, it is much better to rearrange the entire group where a proper background can be found, for an attempt is being made to obtain a group-portrait and not an interior view, and the background must be subordinate to the group.

Always strive to have everything arranged and planned for as far ahead as possible—the placing of the screen or background, and the camera, and a general idea of what is wanted so that when the actual time comes for the tak-

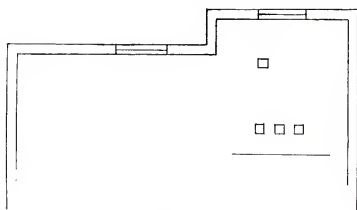


FIGURE A

group. When there are not over two in the group it can generally be arranged near a window, as one would a single portrait, using the same screens and reflectors to secure the different lightings desired. However, when there are



COMRADES

C. E. KELSEY

ing of the picture, there will be no delay nor waits, and one can go quickly to the actual making of the exposure. Nothing produces the air of "having one's picture taken" more than to have to sit awkwardly while the background, screens and camera are being adjusted and put into position. It is far better to have some one exclaim, "Why, you are not finished already?" than to ask, "Whenever are you going to take this picture?"

As to posing, the less of it the better. It is virtually impossible for a photographer to arrange people so that they will appear in natural and easy positions. I do not mean that glaring defects of position, etc., should not be changed, but this can generally be overcome by simply a word of suggestion. Should a group of mother and children be wanted, a chair is placed in the desired location, and the mother asked to be seated. Then call the children to her, showing them a book or toy, or other object of interest. Often one will climb on her lap in order to see more closely, and a very satisfactory group can be taken before the children are aware of it. If a group of children is wanted, arrange some playthings in the proper place, with the camera

ready, and then invite them to play. They quickly lose consciousness and fall into natural and easy positions and the result is a picture highly pleasing to all concerned, for their interest is centered in something besides the camera, which fact not only makes the picture more satisfactory and natural, but more artistic. In home-work we will have better success if the different members of the group are interested in some one or something showing in the picture. This, in a way, makes the whole hang together as a unit, and in viewing the print holds the attention and gives it a normal and home appearance.

In development I am a firm devotee of the tank. Not only for the sake of convenience, but also the uniformly excellent results obtained. I have yet to "doctor" my first negative, believing it much better to take time enough before the exposure to be sure of the correct duration required than it is to attempt to right matters after the negative is made. The negative striven for is one that will give a good print on a soft grade of paper. Then, if there has been a slight misjudgment of time, one is sure to get results by using a harder brand, as one will underexpose more frequently than overexpose in making indoor groups.

In printing, much can be accomplished by a careful study of the different brands and grades of printing-paper, for a negative that may be an utter failure on one grade of paper may make a very satisfactory print upon another grade. Personally, I prefer Artura paper as it seems to suit every required condition.

What success I have achieved I credit largely to the ideas and suggestions gathered from reading and studying different photographic journals, for from reading of the methods of others one

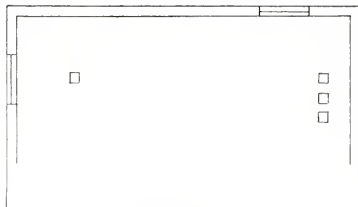


FIGURE B

will gather ideas which can be applied to one's personal problems. Then by their pointing out the right methods from the wrong ones, one is able to start on the right track and so save many disappointments.

Old Black Jim

CLAUDE DAVIS MILLAR

A PHOTOGRAPHIC print seldom, if ever, comes up to our full expectation, but it is the experience, the story connected with the procuring of our picture, that appeals to us; the print simply lends additional interest as a record of an incident that lingers in the memory, as will be seen from the following:

For many days I had passed a certain place where "Old Black Jim" was working. He appealed to me as a good subject for a photographic study, so with my hand-camera I endeavored to obtain his photograph. Strange to relate, however, his actions puzzled me, until finally I asked his permission. Under no circumstances would he permit me to use my camera, so I was about to give up in despair, when the idea occurred to me to interest his foreman in my behalf. This I proceeded to do.

On the following day Jim was found in his usual haunt eating his luncheon. He eyed me suspiciously, for a moment, and then continued to eat. Just then I saw the foreman beckoning me toward him, and this is the tale he told to me.

Jim's experience with the camera-man had been a sad one, for many reasons. The sight of an instrument of that kind recalled to him an incident, a few years back, when, while excavating, he had been photographed in a group with other

workmen. On pay-day the group-photograph was delivered, but to Jim's sorrow he found he was short in his pay to the amount of fifty cents. This came doubly hard just at this particular time, for poor "Old Jim's" wife lay in bed at home with a fever that finally took her from him.

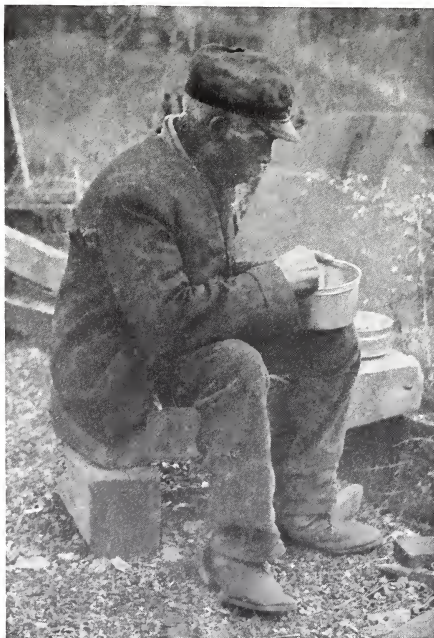
This little incident aroused my feelings to such an extent that I again approached "Old Jim," telling him what I had heard, and that I thought he had not been treated right and that I would be willing to pay him for what, years ago, he had been deprived of. He did not show much interest except that he changed the subject by telling me an interesting little tale about his dinner-pail — how the boys would steal his

luncheon, and the history of his patent-lock dinner-pail. I assured him that I was interested and that probably I could photograph both himself and the pail together, as shown in the accompanying print. Of this I made several copies, neatly mounted, and presented to "Old Jim" along with a bright new fifty-cent piece to replace the one he had cherished so long ago.



To familiarize oneself with pictures of acknowledged merit is one of the best ways to acquire a keen sense of the beautiful.

C. L. Powers.



OLD BLACK JIM

CLAUDE DAVIS MILLAR

The Figure in Landscape

HENRY R. POORE, A.N.A.

A WRITER on the use of the figure in out-of-door photography, after leading the reader through many pages, concludes by saying: "After all, you had better leave them out."

In two works on photography from an English and American press, the writer has seen this article quoted in full and, therefore, infers that the author has been taken seriously.

The relation of man to nature, and the sentiment, interchangeable, proceeding from one to the other, is a link which binds the one to the dust from which he sprang, and the other to the moods of man to whom she makes so great an appeal. It is a union of a tender nature to the real lover of the voiceless influences which surround him:

"Tears, idle tears.

I know not what they mean, . . .

Rise in the heart and gather to the eyes

In looking on the happy autumn fields."

Can a sentiment so strong in fact be divorced in art? It is the fulcrum on which the art of Mauve and Millet and Walker lifts and turns us. It is not necessary to mention other painters; but to the case in point observe that at Barbizon a photographer of artistic perceptions has for years followed in the footsteps of Millet. If nature moves us directly, she will move us through our own kind. We feel the vastness of a scene by the presence of a lone figure. The panoramic grandeur of the sky attracts us the more, if it has also appealed to a figure in the picture. But beyond this affinity in the subject there are sufficient reasons why the figure should be included. The figure can be moved about as a knight in the game, hither and yon as the fixed conditions of topography demand. Many a landscape which would be entirely useless without such an element is not only redeemed, but is found to be particularly prepared and waiting for this keystone. Take, for example, a picture in which lines are paralleling one another in their recession from the foreground or where there is a monotony in any horizontal sequence. The vertical of the figure means the balance of these. The principle is one already noted — action balancing action in contrary direction.

What of the nymphs of Corot, or the *larcuses* bending at the margin of the lake, the plowman homeward plodding o'er the lea, the shepherd on

the distant moor, the woodsman in the forest, the farmer among his fields! We associate our vision of the scene with theirs. When as mere dots they are discerned, the vastness of their surroundings is realized at their expense, and the exclamation of the psalmist is ours: "What is man, that thou art mindful of him?"

The danger in the use of the figure is that it is so frequently lugged in. The friends that happen to be along are often made to do. There is no case where the fitness of things is more compulsory than in the association of figures with landscape. The haymaker creates a sensation on Broadway; but no more so than Dondreary crossing a plowed field in Oxford ties. As the poetry of a Corot landscape invites the nymphs to come and the ruggedness of the Barbizon plain befits the toiling peasants of Millet, so should our landscape determine the chord in humanity to be harmoniously played with it.

A fault in construction is frequently seen in the lack of simplicity of foreplane and background. It must first be determined whether it is to be a landscape with figures or figures in landscape. The half one and half another picture is a sure failure.

The most serviceable material which one may collect in sketching are such positions which play second or third parts in composition: cattle or other animals in back or three-quarter view which readily unite with and lead to their principals.

In the selection of the subject the main object has most of one's thought. This, however, usually "goes" without thought, asserting itself by its own interest. Figures which are less interesting than this, and still less such as will combine with the subject proper, are what the painter and illustrator long for. As with the background, those things which are not of sufficient interest to be worth while in themselves are, owing to their lesser significance, of the utmost importance to the composer.

From Poore's "Pictorial Composition."



I know a painter who cannot tolerate photography. In his opinion a picture which does not reproduce colors is not art. This used to worry me; but now I take consolation in the thought that we have no "eubist" photographs.

Geo. S. Seymour.

EDITORIAL

Use of the Mirror in Focusing

WHEN photographing with a hand-camera in old Bavarian towns several years ago, the Editor found it impossible to see the view in the finder when the camera was placed on the tripod and on a level with his face, unless he raised himself to the required height. This was accomplished by whatever means was available—a chair, a wooden box or the steps leading to some entrance. Often this expedient was not at hand, and so an idea was adopted which to him appeared as new as it proved simple and practical. He drew from his vest-pocket a circular mirror, two inches in diameter, which he happened to have with him at the time, held it over the view-finder at an angle of forty-five degrees, and examined the reflected view without the least difficulty.

Another and equally useful application of the small mirror in focusing was announced in a recent issue of the *British Journal*. It sometimes happens that the camera of the commercial photographer, with which the picture is focused on the ground-glass at the back of the camera, and without the aid of a view-finder, must be placed so close to a building or interior wall that an inspection of the reflected image is impossible. If there is room between the wall and the back of the camera, a small mirror can be used in such a way as to reflect the image upward or sidewise to the eye.

When photographing dark interiors, the use of a mirror of suitable size will be preferable to the usual method of focusing—putting the head under the focusing-cloth and scrutinizing the image on the ground-glass—with the added advantage of seeing the picture in an upright position. The use of the focusing-mirror can be extended to the studio-camera, but here it should be somewhat larger than the ground-glass itself.

In home-portraiture the camera is often placed quite near the floor to catch the little ones at play, and the operator, unless he be something of an acrobat, may find it awkward to focus his studio-equipment; but a mirror hinged to the lower edge of the ground-glass and set at an angle of forty-five degrees will enable him to obtain the desired focus quite easily, and, at the same time, avoid a possibly humorous situation.

Temple of Childhood Unbends

THERE have been lively times of late in the affairs of the Temple of Childhood. As the subject has been agitated more and more by the photographers and the daily and the photographic press, the mercenary character of the enterprise has been made quite apparent. In spite of denials and explanations from the headquarters in St. Louis, the Temple of Childhood is nothing less than a monopoly, and its activities have already begun to disturb the business-relations between the photographers and their regular patrons. A press which at first was disposed to regard the enterprise as benefiting the profession, at large, now questions the integrity of its methods. In order to gain the confidence of families whose children they desire to exploit, the management would issue invitations for free sittings at the studio of its official photographer in that particular locality, but printed on stationery giving the impression that the enterprise was conducted under the auspices of the Panama-Pacific Exposition authorities. How much, if any, real connection exists between the two institutions remains to be seen.

As was anticipated sometime ago, state societies of professional photographers are investigating the subject on their own behalf. The leading portrait-photographers of Philadelphia have held several meetings, at which they protested against the methods practised by the Temple of Childhood in their city and adopted a system of self-protection. In other words, they have declared publicly that, collectively and individually, they have no connection, in any way, with the company known as the Temple of Childhood. This left the only local appointee isolated, and free to continue his own policy. We understand that similar action will be taken by the prominent photographers in other large cities. In view of the wide-spread dissatisfaction which has been created in the profession by the activities of the Temple photographers it is stated that the number of appointees is to be increased considerably, and that, instead of paying a commission for the amount of business done, appointees will hereafter pay a uniform fee of \$50 with no limit on the business they are likely to do, and \$1.00 for each sitting. Other important concessions are to be included in the new arrangement.

PHOTO-ERA MONTHLY COMPETITION

For Advanced Photographers

Closing the last day of every month. Address all prints to PHOTO-ERA, Monthly Competition,
383 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. If preferred, the winner of a first prize may have a solid silver cup, of original and artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request. Enclose return-postage in this letter.

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of *stiff* corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value. Persons interested to have one of these PHOTO-ERA prize collections shown in their home-city will please communicate with the Editor of PHOTO-ERA.

Awards — Shore-Scenes

First Prize: F. W. Hill.

Second Prize: David Bevan.

Third Prize: S. H. Gottschow.

Honorable Mention: Beatrice B. Bell, R. A. Buchanan, A. D. Brittingham, Joseph P. Comolly, Emma C. Durrant, James M. Edsall, Mrs. C. B. Fletcher, Edgar B. Hawkes, Bertram Hawley, M. F. Lawton, W. G. Ogilvie, Richard Pertuch, Joseph P. Rigby, Dr. F. F. Sornberger, Jesse O. Sprague, Heywood H. Whaples, Alice Willis, John Wray.

Special commendation is due the following contributors for meritorious work: James C. Baker, Chas. A. Benz, F. E. Bronson, John B. Clermont, Mrs. L. A. Culbertson, W. Sanford Full, Elizabeth Glynn, C. P. Hey, H. Miller, C. V. Hall, Faith Ivinney, Henry W. Jones, Arthur F. Kales, Clara Kronheim, Taizo Kato, C. E. Kelsey, C. A. E. Long, Elizabeth Meads, Alexander Murray, Rowe D. Murray, Wallace J. Osborn, W. H. Potter, August Reitz, Edwin A. Roberts, Jay Satterlee, Mrs. Anna M. Shurdeff, J. R. Snider, Albert F. Snyder, Herbert Stettenhenn, Jr., Martin Vos, J. V. Votava, L. C. Wagner, B. J. Weeber.

Subjects for Competition

November — "Christmas Cards." Closes December 31.
December — "Home-Scenes." Closes January 31.
January — "Still Life." Closes February 28.
February — "Foreign Travel." Closes March 31.
March — "Flashlights." Closes April 30.
April — "Growing Flowers." Closes May 31.
May — "Telephoto-Work." Closes June 30.
June — "Landscapes." Closes July 31.
July — "Outdoor-Portraits." Closes August 31.
August — "Waterscapes." Closes September 30.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the publisher will give them the choice of photographic supplies to the full amount of the prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and all regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston.

Still-Life — January Competition Closes February 28

Of all the subjects that have been suggested for our competitions, none has offered such free play for the imagination and individuality of the man behind the camera as does this.

In the making of landscape-studies, the worker, to be sure, may make or mar the composition by his choice of view-point, of time of year, or time of day, best suited to express the mood of nature he wishes to portray; yet, after all, his control over the component parts of his picture is greatly limited.

Trees will grow in such ways and places, and many a time an otherwise perfect grouping is ruined by an encroaching branch, or a tree or rock in the wrong place, which no amount of skirning can avoid.

Nature is "too inaccessibly proud" to admit much rearranging to suit the ideas of any upstart photographer. In this respect the artist of brush and pencil has the advantage of us in his ability to portray the desirable and omit that which offends or seems unnecessary.

In interior subjects the same conditions hold. In the arrangement of furniture and accessories we have more or less control; but the background of walls and the arrangement of doors and windows are unalterable facts, to be dealt with as best we may.

In portraiture, we have more leeway; but perfection in a model is no easy thing to find, and the sitter's individuality must be dominant.

But when it comes to the representation of inanimate objects — "still-life," as the artists term it — there is virtually no restriction on the worker. His choice of subject, background, light and shade is unhampered, and the possibilities to express his own individuality in arrangement and spacing are almost limitless. Moreover, his are in every sense willing models.

In the first place, there are such varied possibilities in the selection of the subject, itself. Any mood of the worker, whether it tend toward the grave or the gay, may find expression in some well-chosen group. Should

you come to your task fresh from the Persian Omar's delicious pessimism or the "Vanitas Vanitatum" of Ecclesiastics, perhaps the thought

"When you and I behind the Veil are past
Oh, but the long, long while the World shall last,"

may prompt you to arrange a group with such material as a crucifix, a skull, an old missal and a rosary.

Or, if the couplet that lingers in your memory should be

"Come, fill the cup, and in the fire of Spring
Your winter-garment of Repentance fling,"

then, no doubt, you will seek out some quaint wine-bottle, or flagon of unique shape, and unite with it a drinking-glass or antique cup with, perhaps, a loaf of bread partly cut.

This theme may suggest to you similar ones, such as a German beer-mug, with some strangely-formed pipe of Teuton extraction; a Turkish water-pipe, with some

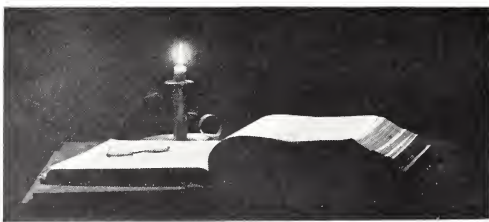
brass dish or a ewer of contrasting shape; or a decanter and glasses, with crossed clay pipes reminiscent of Pickwickian scenes of conviviality; or yet a bottle of Chianti — filled or empty — a dark-colored pipe and a tobacco-pouch, and numerous others.

The larder will furnish many a pleasing theme: a basket of fruit or berries; an arrangement of green vegetables; a group of dead game; or a Japanese teapot, with steaming cup on an appropriate tray.

But, possibly, you feel like perverting Meredith and saying, "Man may live without friends, man may live without cooks; but civilized man cannot live without books."

Turn, then, to your library and select some ancient tome whose massive bulk will contrast well with a slender candle-stick, and add a pair of old spectacles, or a group of smaller books may be chosen for combination with candle or lamp. Be careful not to combine new and old in the same group.

Perhaps it is at Music's shrine that your heart yields allegiance. If so, you may find keen pleasure in so



STILL-LIFE

KATHERINE BINGHAM



THE PEARL OF ORR'S ISLAND

FIRST PRIZE — SHORE-SCENES

F. W. HILL

arranging your violin with its bow and a few sheets of music that its graceful lines will show to best advantage. A mandolin or guitar can also be made a satisfactory subject, if well handled.

The great secret of success, here as elsewhere, is simplicity. Do not overcrowd your space, leave plenty of room on all sides. A little too much space is easily trimmed away, whereas a crowded plate is hopeless.

Choose objects that bear some relation to one another. Do not bring together a motley collection of things, each interesting in itself, but having nothing in common.

Ruskin says: "The great object of composition being always to secure unity—that is, to make many things one whole—the first mode in which this can be effected is by determining that one feature shall be more important than all the rest and that others shall group with it in subordinate position."

The first thing, then, is to determine what that one most important feature is to be. That decided, the next thing is to determine in what way it shall dominate the composition, whether by position, size or value, or a combination of two or more of these.

As to position, the weakest spot in a composition is the center, and this location should be carefully avoided for our principal object.

A simple form of composition, and one much used by the old-masters, is that of the triangle. The table in such subjects as those now under consideration would form the basal line and a point about one-third of the way

from one end would be the correct place for the apex, to be formed by our chief object of interest, the other objects to be used to form the lines leading to this one point.

Predominance through size needs no explanation, but the matter of value may be less evident. Color is something that is still largely outside the sphere of photography. The worker in monochrome must obtain his effects through the handling of lights and darks, and he may establish the predominance of any object in his composition by making it the highest light or the darkest dark, or else by bringing the extremes of light and dark together at that point.

It is very easy to allow oneself to be deceived by color. Red, particularly, is deceptive to the eye. By its brilliancy of color it catches the eye and, if the subject were to be reproduced in color, it would easily hold the center of the stage; but as rendered by the sensitive plate it is quite the lowest tone in the scale and we may be astonished to find our would-be-brilliant-high-light almost entirely merged into the background. Yellow is another color that the plate renders very much lower than it seems to the eye. Blue and violet, on the contrary, are raised in the scale and appear much more brilliant than we see them.

Even when a color-screen is used, these idiosyncrasies of the plate must be taken into account more or less.

The matter of background is an exceedingly important one and may make or mar your picture. As a



SEAWARD

DAVID BEVAN

rule, a plain ground is best, although for some things — such as dead game, for instance — a panel of wood showing a not too prominent grain makes a very suitable and satisfactory ground. A rabbit or brace of quail suspended by the feet against a quartered oak panel would be in keeping, or a large bunch of grapes with the foliage may be hung in such a way as to cast delightful shadows along a plain wood surface.

The value of your background should, generally speaking, be somewhere between your highest light and deepest dark, and chosen to bring out to best advantage your most important object. Sometimes, however, it adds an element of mystery to have the ground nearly the same value as the less important details; their outlines blending with the setting give a sort of atmospheric effect and spur the imagination.

Your background can be raised or lowered in value by the amount of light it is allowed to receive and can in this way be adjusted to almost any requirement of the subject chosen.

No folds or wrinkles should be tolerated in the ground, and it should be sufficiently out of focus to cause total loss of detail and texture.

The focus should be fairly sharp on the group itself, as the beauty of this class of work depends largely, after good composition, on the delicate rendering of texture.

Fur must look like *fur*, not like cloth; glass should have its proper gleam and glisten, not look dead and opaque, whereas the glint of brass and copper has its own peculiar charm not to be confused with the differing sheen of pottery.

This is largely a matter of correct focus and exposure. Too small a stop should be avoided, however, or that disagreeable wire-sharpness will be obtained, with a loss of all atmosphere and perspective.

A study of the work of the old Dutch school of painters will furnish you with many ideas both as to subject and treatment, and a pleasanter or more profitable photographic pastime for the winter months would be hard to find.

It will furnish free play for your powers of imagination in selection of subject; plenty of study and ingenuity in composition and arrangement, and will test your technical ability in the proper rendering of texture and values.



BOYS WADING
S. H. GOTTSCHO
THIRD PRIZE — SHORE-SCENES

NOON
BERTRAN HAWLEY
HONORABLE MENTION — SHORE-SCENES





ALONG THE JERSEY COAST

RICHARD PERTUCH

ALAMEDA MARSH

MRS. C. E. FLETCHER

HONORABLE MENTION — SHORE-SCENES



Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.

To remove iron-stains on the surface of gaslight-prints, soak the latter in a solution composed of water 10 parts, potassic oxalate, 1 to 1½ parts. If the stains or spots resist the action of the solution, a prolonged rubbing with the finger-tips tends to make them disappear, after which the print or prints should be removed and thoroughly rinsed in pure cold water.

L. A. A. — It is virtually impossible to do any satisfactory **copying for commercial purposes** with a Brownie or a Buster Brown camera. A folding camera with long bellows-draw is required, as well as a focusing-screen to ensure sharp definition.

P. G. — *The Photographic Annual*, made up of photographic facts, and formulae of photography, is no longer published. It is now incorporated in the *British Journal Photographic Annual*, a copy of which should be owned by every serious photographic worker. The book on photographic formulae, the "Agfa Book," published by the Berlin Aniline Works, of New York City, is an American publication costing only ten cents.

W. E. H. — You can probably remove the **chromium intensifier stain** on your negative by immersion in a solution of potassium metabisulphite, 10 grains to an ounce of water, followed by a thorough rinsing in water.

M. N. C. — **Blisters on prints** are due to wash-water much colder than the fixing-bath. Allowing water to fall a foot or more from a faucet upon prints will also cause them. Use a hose to convey the water from the faucet to the bottom of the wash-bowl.



EASTERN POINT LIGHT

E. B. HAWKES

HONORABLE MENTION — SHORE-SCENES

B. K. — When in a hurry to **dry a negative**, flow 95 percent alcohol over the plate, which action forces the water from the plate. It then can be placed in a strong draft, but so that the eventual "bone-drying" will be uniform, and the negative soon be dry. An electric fan will serve the purpose admirably.

Another way, when alcohol is not handy, is to take a clean white blotter, preferably the "World blotter," and press it over the wet plate or film. This takes off the superfluous moisture. The still moist negative is then placed in a strong draft; but the drying must be absolutely uniform, otherwise drying-marks will result. If films, use 95 per cent alcohol as we do with plates.

The quickest way — adopted by the newspaper press, is to immerse the rinsed negative for five minutes in a ten-percent solution of formaldehyde, "formaline," then in hot water for about two minutes. Thus the negative should be quite dry in ten minutes altogether.



AFTERNOON ON THE COAST

L. VINTON RICHARD

SECOND PRIZE — BEGINNERS' CONTEST



A SUMMER LANDSCAPE

J. W. HEEBNER

Print-Criticism

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Guild Editor, PHOTO-ERA, 353 Boylston Street, Boston. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.

H. G. — "Silhouette" is well named, but as a picture it is not satisfying. A suggestion of detail in the foreground and tree-trunks, however little, would lend interest to the picture without detracting from the interest of the sky, which, incidentally, seems to mean little.

A. S. K. — Your print of two children at play is very good, considering your limited experience and the fact that it was made in the home. Six seconds exposure — although necessary in the circumstances — was too long to arrest movement in the juvenile sitters. It would have been better to make the exposure by flashlight, provided you are familiar with this process, which ordinarily is not recommended on account of its dangers.

As to arrangement, the picture suffers from too many objects, resulting in confusion in the design; besides, the pose of the little ones is too contracted. This feature would have been improved if the camera had been higher.

The lighting is not bad, but it might have been better to place the camera a little more to the left, so as not to include the window. The developing and printing appear to be satisfactory.

C. E. K. — Your print "Going Rowing" is attractive in sentiment and well composed. For the size of it, however, the paper used seems rather too rough.

E. C. D. — Your print, "A Find," shows the need of much greater exposure when figures appear in the foreground of shore-scenes than when they are absent. The exposure given was ample for the scene itself, but the figure of the little girl is a mere black mass, requiring at least four times the exposure given. The best course to pursue is to give the necessary exposure and then employ a weak or restrained developer, and be careful not to carry development too far.

L. C. W. — There are three centers of interest in your photograph, each containing material for a separate picture. This is a frequent fault, which should be avoided in the interests of unity and simplicity.

R. P. — There seems to be nothing to alter in "A Real Vacation." It is admirably managed in every particular. The way in which the prominent lines of the composition lead up to the figures is particularly commendable.

J. W. — A gum-print on such rough paper and of such small size seems rather too broad and muddy for such a subject as "Under the Bridge." Very little is conveyed to the mind by it.

L. B. V. — A statue of Beethoven seems too dignified to be photographed with several children playing haphazard about it. Were these children so engaged as to form a unified group they would be less objectionable.

J. W. H. — "Across the Pond" is a boldly-treated but well-composed picture. Its only serious fault is the stub protruding from the water at the right. Disturbing objects which serve no good purpose and attract attention to themselves should be removed before making an exposure if possible, or else worked out of the negative by retouching.

THE ROUND ROBIN GUILD MONTHLY COMPETITION

For Beginners Only

Closing the last day of every month. Address all prints to PHOTO-ERA, Round Robin Guild Competition, 383 Boylston Street, Boston, U. S. A.

Restrictions

ALL Guild members are eligible in these competitions provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Anyone who has received only Honorable Mention in the PHOTO-ERA Monthly Competition for advanced workers still remains eligible in the Round Robin Guild Monthly Competition for beginners; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

Prizes

First Prize: Value \$5.00; *Second Prize:* Value \$2.50; *Third Prize:* Value \$1.50; *Honorable Mention:* Those whose work is worthy will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "General;" but only original prints are desired.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. All prints submitted, except prize-winners, will be returned if postage is sent in a separate letter with the data.

Rules

1. These competitions are free and open to all members of the Round Robin Guild. Membership is free to all subscribers and regular purchasers of PHOTO-ERA sending name and address for registration.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request.

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of stiff corrugated board, not the flerible kind, or with thin wood-veneer. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

Awards — Beginners' Contest

First Prize: J. W. Heeber.

Second Prize: L. Vinton Richard.

Third Prize: Herman Gabriel.

Honorable Mention: Norton Lewis Avery, Ernest A. Kallinich, O. P. Lynum, C. A. E. Long, A. J. Voorhees, Clyde C. Kerr, W. C. Ogilvie, James Allan, M. A. Hollenbeck, E. Keaough, Jack Salton, G. C. Schindele, H. M. Lyman, E. Sparks Freeman.

Special commendation is due the following workers for meritorious work: B. J. Weeber, N. Lihon, T. D. Field, Gardner D. Howe, Roscoe W. De La Mater, Louis R. Murray.



A SUMMER MORNING

H. GABRIEL

THIRD PRIZE — BEGINNERS' CONTEST

Exposure-Guide for January

Calculated to give Full Shadow-detail at Sea-level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of time in table. From 8000 to 12000 feet use $\frac{1}{2}$ of exposure in table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class I plates, stop F/8 or U. S. 4. For other plates, or stops, see tables.

Hour	Bright Sun	Sun Shining Through Light Clouds	Diffused Light	Dull	Very Dull
11 A.M. to 1 P.M.	1/32	1/16	1/8	1/4	1/2
10-11 A.M. and 1-2 P.M.	1/25	1/12	1/5	1/3	2/3
9-10 A.M. and 2-3 P.M.	1/12*	1/6*	1/3*	2/3*	1*

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions under which one works. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop.

*These figures must be increased up to five times if light is inclined to be yellow or red. Latitude 60° N. $\times 3$; 55° $\times 2$; 52° $\times 2$; 30° $\times \frac{3}{4}$.

For other stops multiply by the number in third column

F/4	U. S. 1	$\times 1/4$
F/5.6	U. S. 2	$\times 1/2$
F/6.3	U. S. 2.4	$\times 5/8$
F/7	U. S. 3	$\times 3/4$
F/11	U. S. 8	$\times 2$
F/16	U. S. 16	$\times 4$
F/22	U. S. 32	$\times 8$
F/32	U. S. 64	$\times 16$

SUBJECTS. For other subjects, multiply the exposure for average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most tele-photo subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, to glades and under the trees. **Wood-interiors** not open to sky. **Average indoor-portraits** in well-lighted room, light surroundings.

Example :

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an open landscape, without figures, in Jan., 2 to 3 p.m., bright sunshine, with plate from Class I, R. K. Lens, stop F/8 (or U. S. 4). In the table look for "hour," and under the column headed "Bright Sunshine," note time of exposure, 1/12 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of "Table for Other Stops," opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply $1/12 \times 4 = 1/3$. Hence, exposure will be 1/4 second, approximately.

For other plates consult Table of Plate-Speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. $1/12 \times 1/2 = 1/25$. Hence, exposure will be 1/25 second.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

<i>Society or Title and Place</i>	<i>Date</i>	<i>Particulars of</i>
KODAK EXHIBITIONS Armory, Portland Oakland Hotel, Oakland Scottish Rite Auditorium, San Francisco Shrine Auditorium, Los Angeles Odeon Dancing-Academy, Salt Lake City	Dec. 31 to Jan. 3 January 7 to 10 January 12 to 17 January 19 to 24 January 27 to 31	Eastman Kodak Company, Rochester, N. Y.
NEW YORK CAMERA CLUB Carnegie Art-Galleries, Pittsburg	January 3 to 31 1914	S. deKoskenho, Chairman. 18 East 40th Street, New York.
TORONTO CAMERA CLUB SALON	April 27 to May 2 1914	A. G. Fraser, Secy.-Treas., Toronto Camera Club, Toronto, Canada.
WANAMAKER ANNUAL EXHIBITION	March 2 to 31 1914	John Wanamaker, Photographic Dept., Philadelphia, Pa.

Notes on the Use of Exposure-Meters

For those who wish to use a meter that is accurate in all conditions, we can recommend both the Wynne and Watkins. Both depend on the tinting of a sensitive

paper to a standard shade, thus giving the exact actinic value of the light.

For a practical and lucidly-written article on the use of exposure-meters, at all seasons of the year, see PHOTO-ERA, January, 1912.

Plate-Speeds for Exposure-Guide

Class-numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1 3, P. E. 155, W. 350, Wa.
Lumière Sigma (Violet Label)
Wellington 'Xtra Speedy Extreme

Class 1/2, P. E. 128, W. 250, Wa.
Barnet Super-Speed Ortho
Cramer Crown
Eastman Speed-Film
Iford Monarch
Imperial Flashlight
Seed Gilt Edge 30

Class 3/4, P. E. 120, W. 200, Wa.
Ansco Film, N. C. and Vidil
Barnet Red Seal
Central Special
Defender Vulcan
Ensign Film
Hammer Special Ex. Fast
Iford Zenith
Imperial Special Sensitive
Seed Color-Value
Wellington 'Xtra Speedy

Class 1, P. E. 111, W. 180, Wa.
American
Barnet Extra Rapid
Barnet Ortho Extra Rapid
Hammer Extra Fast, B. L.
Imperial Non-Filter
Imperial Orthochrome Special
Sensitive
Kodak N. C. Film
Kodoid
Lumière Film and Blue Label

Premio Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso Speedy

Class 1 1/4, P. E. 90, W. 180, Wa.
Central Comet
Cramer Banner X
Cramer Instantaneous Iso
Cramer Isonon
Cramer Spectrum
Defender Ortho
Defender Ortho. N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 26x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, W. 160, Wa.
Cramer Anchor
Lumière Ortho A
Lumière Ortho B

Class 2, P. E. 78, W. 120, Wa.
Cramer Medium Iso
Iford Rapid Chromatic
Iford Special Rapid
Imperial Special Rapid
Lumière Panchro C

Class 3, P. E. 64, W. 90, Wa.
Barnet Medium
Barnet Ortho Medium
Hammer Fast
Seed 23
Wellington Landscape
Stanley Commercial
Iford Chromatic
Iford Empress
Cramer Trichromatic

Class 5, P. E. 56, W. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho
Wellington Ortho Process

Class 8, P. E. 39, W. 30, Wa.
Cramer Slow Iso
Cramer Slow Iso Non-Halation
Iford Ordinary
Cramer Contrast
Iford Half-tone
Seed Process

Class 100, P. E. 11, W. 3, Wa.
Lumière Autochrome

OUR ILLUSTRATIONS

Edited by WILFRED A. FRENCH

How many will doubt that our front cover this month has a cheerful aspect? As an expression of good humor and good rendition of color-values the portrait appears a complete success. It is one of two portraits which gained for the artist, W. H. Partridge, the prize—a large silver loving-cup, offered by the Wollensak Optical Company. The picture is repeated on page 12. Data: 8 x 10 studio-camera; 8 x 10 Verito lens; full opening; Cramer plate; pyro.

The frontispiece, "Mt. Pleasant," by Walter R. Merryman, emphatically belies the charge that the mountain-scenery of the state of New Hampshire is tame and without pictorial interest. It is said that the higher elevations look their height better when covered with snow than otherwise. The view was taken when long shadows fall, weaving designs upon the snow-covered river and creating an interesting foreground in a magnificent winter-landscape. No data.

The other winter-scenes, likewise incorporated in Mr. Riley's story of winter-holidays in New Hampshire, also serve to present the attractive side of a typical winter-season in New England, and, incidentally, all are excellent examples of photographic craftsmanship. The interpolated scenes by Phil M. Riley, moreover, are views which interpret eminently the true New Hampshire atmosphere in mid-winter. Data: 3A Kodak; R. R. lens; F/8; $\frac{1}{100}$ second for "The Camerist's Revel," on Esigun film; $\frac{1}{100}$ second at F/11 for "The Spirit of New Hampshire" on Kodak film; pyro tank-development; enlarged prints on Monox bromide paper 8 x 10.

A picture by J. H. Field is easily recognized by its poetic quality and modest design. His perspective and values are invariably true and his productions breathe the spirit of the genuine artist. This tribute is quite true of "Winter Mist," page 11. No data.

A quiet and agreeable winter-sketch, with a touch of originality, is by John F. Jones, page 14. The means are few, but they have been used with artistic judgment. No data.

The picture on the opposite page is a familiar scene, replete with interest clearly, but presented without a definite purpose. If the viewpoint had been chosen more wisely—for the spot presents numerous pictorial possibilities—a more satisfying arrangement would have resulted.

The pictures which illustrate the successes of the American School-Boys' Contest, pages 16 to 19, are of unusual interest. The result of this unique competition was announced in December PHOTO-ERA. The chief prize-winner, James R. Starr, has contributed a lucid and well-written story of his photographic experiences on this enjoyable European tour, and special comment of the various pictures would seem superfluous. It may be said, nevertheless, that seldom have we looked over a set of photographs—in this instance from eighty different places along the route—in which the camerist displayed so much intelligence and judgment in the use of his equipment, and such discrimination and taste in the selection of pictorial subjects, as evidenced by James R. Starr. He developed his own films; but a photo-finisher made the prints.

"Dutch Fishermen," page 16. Typical old Dutch salts, whose faces do not seem to indicate a happy disposition. The background, admirably chosen, is the

making of this picture. Data: Regular 3A Kodak, his only equipment on the tour; F/8; August, 11 A.M.; clear light; Eastman film; $\frac{1}{25}$ second; B. & J. M. developer.

Group, page 17, bears out our statement regarding the camerist's judgment in using his equipment.

Venice, from the church of San Giorgio Maggiore, page 19, is a view familiar to most visitors to the "Queen of the Adriatic." From the top of this lofty church-tower, the most notable set of buildings in northern Italy, is seen at its best—The Zecca (Mint) Library of St. Mark, Campanile, Piazzetta with its two columns, Ducal Palace, Bridge of Sighs, Ponte di Paglia and the Prison. Although the Kodak was pointed downwards, all the vertical lines appear plumb, because the buildings are safely distant. Data: August, 11.30 A.M.; clear; F/16; 3 seconds (overexposed, but saved in development); other data same as in "Dutch Fishermen."

A horse, a steer and a mule, hitched abreast to a wagon, is not an uncommon sight in Naples. The camerist showed excellent judgment in the "spacing" of his picture. It is well proportioned. Had he waited a few seconds longer, the odd-looking team would have occupied the center of the picture-area, and the present artistic effect would have been lost. A team of any sort, like a water-craft, looks better in perspective than in a full side view. Here the buildings converge towards the top, because the artistic sense of the photographer demanded a picture of good proportions; and so the camera, having a rigid back, was tilted slightly upwards. Data: September, 11 A.M.; clear; F/8; $\frac{1}{25}$ second; other data same as in "Dutch Fisherman."

La Laiterie or dairy, at Versailles, associated with the happy days of the unfortunate Marie Antoinette, is generally the object of sympathetic interest. Mr. Steiger, also a member of this school-boys' tour, obtained a very satisfactory view. Page 18. Careless estimate of the distance, no doubt, was responsible for the sudden falling-off of the definition at the right, although the picture is not seriously impaired thereby. 1A Special Kodak; F/8, noon sunlight, $\frac{1}{100}$ second; film; developed by Harvey & Lewis, Springfield, Mass.; Velox print.

The group of boys—members of this memorable party—pictured on page 18, shows the result of a full exposure. There are no chalky faces, which mark and mar open-air group shots made by most boy-camerists. Data: Premo, postcard size; B. & L. Planatograph 6-inch lens; F/8; August, 9 A.M.; Eastman film-pack; dull light; 1 second; $3\frac{1}{4} \times 5\frac{1}{2}$ velox print.

Apropos of the picture of pretty children and the "Temple of Childhood," what say our readers to the little German girl, page 22? Even the cherubs of Murillo or Raphael do not surpass little Minna in her perfect facial beauty. We are sorry not to know the artist's name; the picture, in the form of a postcard, was sent to the Editor from Munich.

The scenes of babies in their own home, as pictured by C. E. Kelsey on pages 23 to 27, have a freshness, spontaneity and *naïveté* almost impossible to catch in the professional studio, or even by the average skilled home-portraitist. The amateur, as a member or even a friend of the family, has an undisputed advantage and—but let Mr. Kelsey tell how he obtains his results.

Claude Davis Millar is a store-house of optimism, sympathy and good cheer. He shows it in his pictures, in his letters, in his sunny disposition. His little story of the colored man woven around a picture made on the spur of the moment, page 28, testifies to this. By the way—and this may surprise him—Mr. Millar probably never made a better picture—a real picture—than that of Old Black Jim and his dinner-pail.

As her stock of negatives, which includes a number of serviceable still-life subjects, was not accessible, Katherine Bingham hastily arranged a book, a pair of spectacles and a candle, and obtained a still-life sufficiently good (page 32) to illustrate her points in this extremely engrossing and productive "Still-Life" competition, which she has treated in her department this month. The picture is intended to serve merely as a hint; yet let us see how many will surpass it.

The Photo-Era Monthly Competition

ALTHOUGH the yield in "Shore-Scenes" was prolific, it contained not a few entries which could not be accepted, because they lacked the essential characteristic of obviousness. These views were undoubtedly made at the sea-shore, but there was no visible proof of it in the pictures. The sea could be easily imagined by the photographer, or by any one who knew the locality. Other inadequate contributions pictured a lonely rock surrounded entirely by water, etc. Here, again, the pictured or even suggested shore was absent. Fortunately, the successful representations of the subject far outnumbered the doubtful efforts, and of the former the variety and interest were, indeed, great.

In "Orr's Island" F. W. Hill has achieved distinct pictorial success. The "Pearl House," associated with Harriet Beecher Stowe's story, "The Pearl of Orr's Island," has been pictured with admirable artistic discretion by Mr. Hill, page 33. The island is situated in Casco Bay, on the coast of Maine. The rocks and seaweed, disclosed at low tide, aid in presenting the character of Orr's Island and enhance the beauty of the setting to the distinguished white house standing a little back of the rock-bound shore. The pleasing sketchy effect in the print is due to the method of enlarging. Pleasing as is this portion of the composition, it would take its proper place as an adjunct in the picture—subservient to the Pearl House—were it a shade less obtrusive, which result might be effected by skillful printing. Data: September, 11 A.M.; bright sun; 4 x 5 Korona camera; 6½-inch R. R. lens; at F/6.8; 5 times ray-filter; 1/5 second; Wellington Anti-Screen plate; pyro-acetone; 8 x 10 Linen Cyko enlargement with Smith lens; smooth print for reproduction.

The combination of shore and sky, as presented by Dr. Bevan, page 34, is exceedingly attractive, the color-values are well maintained and the pictorial proportions judiciously calculated. Data: July, 1913; 6.15 P.M.; Hydra plate; pyro-soda tank-development; 9-inch Verito lens; at F/8; 1/25 second; focal-plane shutter; 4½ x 6½ W. & C. plat. print.

The introduction of children is the making of Mr. Gottscho's highly successful shore-scene, page 35. The unconscious, graceful attitudes of the two boys, their place in the picture, together with the wise juxtaposition of the little models, are worthy of high praise. Data: July 2, 1913; 5 P.M.; good light; Goerz Tenax with Dagor lens; 6½-inch focus; stop, U.S. 4; 1/50 second; film-pack; pyro tank; 7 x 9 Barnet Bromide enlargement; duratol-hydro.

The human element enters into the success of a picture. Page 35. The spirit of outdoor-life makes a special appeal here. The right-hand figure engages the

clump of tree-trunks with somewhat unfortunate pictorial result; but the other figure with his discreet control of the canoe occupies a more favorable position. Data: August; bright noon-light; 8-inch 5 x 7 Cooke lens, F/5.6, mounted in Multi-Speed shutter; used at F/8; 1/50 second; 4 x 5 Wellington Extra Speedy; pyro; 7 x 9 Wellington Bromide enlargement; amidol.

One needs to examine Mr. Pertuch's, "Along the Jersey Coast," page 36, closely, not to mistake it for a view of Katwyk, on the coast of Holland. The effect of the somber line of houses and cliffs strongly relieved against a bright sky, and the white sand of the curving beach is exceedingly good. Data: June 30, 4 P.M.; hazy; 4 x 5 Standard Orthonon; pyro; 6-inch Collinear; at F/8; 1/25 second; 4½ x 7 Artura Carbon Black enlargement.

Viewed from the shore and balanced by an appropriate sky, "Alameda Marsh," page 36, forms a magnificent nature-study—an often-neglected subject admirably treated. The vast array of cumulous clouds—more properly, "cumuli"—are an admirable foil to the several strongly-marked parallel lines of the waterscape. Data: Late afternoon of early autumn; 4A Kodak; Eastman N. C. film; F/8; 1/25 second; Cyko Buff print.

A strikingly typical illustration of the subject is "Eastern Point Light," page 37. Again the foreground proclaims its joy in joining forces with the chief point of interest to aid in making a successful picture. The clouds overhead also contribute their share, although one regrets to admit that if about half an inch were to be trimmed off the top, the picture would look better proportioned and the effect of loftiness increased. Technically the result is entirely satisfactory. Data: June 8, 1913; partly cloudy; Cramer Inst. Iso. D. C. plate; 6½-inch Cooke lens, series III; used at F/16; Cramer 3-times ray-filter; 15 second; pyro tank; 5 x 7 Standard Bromide enlargement.

The Beginners' Competition

BOLD effects of contrast are characteristic of Nature's varied moods, and well shown in another picture, by mere chance also a shore-scene, page 37. Mr. Richard's next attempt to picture a similar phase of the sea will doubtless show a better control of the light, which here is riotous, indeed. The view-point, however, is well chosen. Data: October 20, 1913; 3.30 P.M.; 4 x 5 Graphic Camera; B. & L. 6-inch R. R. lens; stop U.S. 4; 1/25 second; Cramer Portrait Isonon; edinol-hydro; Semi-Matte Monox enlargement.

It is not often that a participant in our Beginners' Contest wins the first prize twice in immediate succession; but this was the experience of J. W. Heebner. His first successful picture appears on page 38; the next will be published in the February issue. The former appeals to us on account of its true presentation of values, departure from hackneyed forms of composition and boldness of technique. The picture will repay thoughtful examination even by advanced workers. Data: August, 3 P.M.; bright; Hamner Ortho; M. Q.; Conley Ortho lens; at F/8; 3 times ray-filter; 1/35 second; 4 x 5 soft Argo.

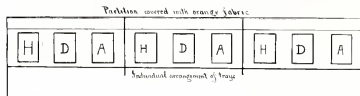
An unusually attractive picture, this, by Hernan Gabriel, page 39. The scene represents a study of shadow, rather than of summer morning; and what receives most of our interest is the large tree in the center of the picture-area. The tonal values are extremely good, but the spirit of the picture, according to the title, is not obvious. Data: August, 8 A.M.; Conley 3¼ x 5½ camera; 8½-inch R. R. lens; at U. S. 64; no sun; Vulcan plate; 4 seconds; Eastman M. Q.; Argo soft print; made before oil-lamp.

ON THE GROUND-GLASS

Edited by WILFRED A. FRENCH

Darkroom-Diversions

A GROUP of wool-gatherers (impressionists) was lounging about the spacious darkroom of the Hypoville Camera Club while members of the sharp-focus brigade were having their innings at the sink, developing their prizes of the club's annual field-day. The plates, 4 x 5 and 5 x 7 in size, were passed by each worker successively from the developer to the hypo- and alum-trays, which were placed in a row on the slats of the long sink, nine in all — three for each worker, whose place was divided from that of his neighbor by a low partition. The weather



was exceedingly warm, hence the precaution of the hardening-solution. An hour or so passed amid pleasant conversation and harmless sallies between the two factions, when F/64 spoke up. "I wonder what makes this plate look so thin? The first two have plenty of density, but this one is weak and has a veil all over it." — "Perhaps you looked at it too long in front of the orange fabric before fixing it," suggested his neighbor, F/45. "Wait a bit, F/64, mine looks the same as yours — thin and lifeless, no body to it, and I held it up before the light only a few seconds before fixing it, so it can't be that. I know now; the emulsion is poor in silver. That firm must want to economize with a vengeance, or else the emulsionist is keeping some of the silver nitrate. I've heard of such cases before!" Audible tittering from the wool-gatherers. "Now, don't be an ass, F/45," piped up F/128. "You two fellows are using different makes of plates, and I don't use either of them, yet the plate I've just lifted from the alum-bath is as diaphanous as thin muslin. I think it's this blasted orange fabric. I bought it as a strictly non-actinic medium. I am sure it admits blue and green rays and has fogged most of our plates this evening. I'm going to change it for ruby to-morrow. Let's put our plates away to wash, and adjourn to the studio for a smoke." Uproarious laughter from the ranks of the fuzzywites. "What are you fellows fussing about? This is no joking matter!" angrily remarked F/128. "It is," replied Wooley Outline. "If you fellows mix hypo with the developer, as you are doing this evening, how can you expect to get contrast or substance with such a combination?" Consternation among the working trio, followed by angry accusations and denials. In a short while the turmoil subsided, with the oldest fuzzywite picking up a discarded negative and exclaiming: "Just to show you fellows that there's no conspiracy or dirty work going on in the club, I'll explain how you've been developing all evening with pyro, soda and hypo. I didn't, myself, catch on until I noticed F/128 take his last plate from the hypo-tray and rush it, *dripping horribly, directly over his developing-dish*, into the alum-tray — just like this." And then he suited the action to the word. Needless to say that the arrangement of the trays was changed immediately, and there was no further trouble from this source.

The Undraped Figure

FEW men in any profession have experiences of so interesting a character as the photographic demonstrator or the studio-operator. One of the latter class is now the proprietor of a successful studio in Missouri, and recently renewed his subscription to PHOTO-ERA. Being an old friend of the Editor, he wrote a chatty letter in which he referred with seeming enjoyment to an incident which occurred when he worked as a printer's assistant at the R-studio, about thirty years ago. To quote that part of his letter —

"To be fired by Mr. R, himself, comes to me very clearly. It was one Sunday when he had me come in to help him on some work — filling holders, etc. About two o'clock I was up in the printing-room on some errand, and happened to look down into the operating-room (studio) through a window in the wall of this room, even with the floor, which helped give ventilation to the room below, and there, in all her glory, was a woman posing à la Trilby in the "All Together," and in my excitement yours truly fell through the opening to the evident embarrassment of the visitor and the artist, the latter finishing my hurried entrance by a reversal of the film — and entrance becoming exit. No, I never went back."

Troubles of a Subscription-Clerk

WHEN the Publisher solicits subscriptions from all parts of the world, indiscriminately, he does not complain when he receives one to be addressed as follows: M. Hiralara, c/o Mr. Kunikichi Ogino, Haguro, Ohomiya-Mura, Nishi-Yamanashi-Gun, Yamanashi-Ken, Japan.

He Mistook the Source

A GENTLEMAN who professed to understand photography came into our work-room recently and asked to see a sepia on developing-paper, and, not having a specimen handy, I took an old print and two wads of absorbent cotton, one saturated with the bleaching-solution and the other saturated with the redeveloper. By applying the first wad the picture was bleached. After a slight rinse in water, I applied the second wad, which contained redeveloper, and the picture assumed a sepia tint.

His surprise was great. He exclaimed, "Where can I buy some of that cotton-batting?" — LEON B. SHAW.

A Doubtful Compliment

RECENTLY I sent for a plumber to do some work on my darkroom sink, and when he arrived I was working on some portraits of a well-known man of this town. The plumber looked at the prints, and the following conversation took place:

"Say, them's pretty pictures, ain't they?"

"I think they're rather good."

"Who is he, anyway?"

"Don't you know him?"

"No, I don't believe I do."

"Mr. R."

"Oh! Yes, I've known him for years! Why, say, come to look at them, they do look kind o' like him, don't they?" — P. L. A.

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Edited by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department
Address all such communications to The Crucible, PHOTO-ERA, 383 Boylston Street, Boston

Writing on a Negative

WHEN writing is to be done upon a negative so that it shall show in light letters on the print, it is easy to write or print the inscription required as neatly as possible on well-glazed writing-paper, using ordinary office copying-ink, and allowing it to get dry. When dry, the negative on which the title is to appear is soaked in clean water for a few minutes and then stood up to dry surface-dry, which it will do in about five minutes. The writing is then laid down on the film, rubbed well into contact, and left there for half a minute or so, and the paper then stripped off. It will not be so opaque as to print quite white, at least that is the writer's experience with copying-ink; but it prints fairly light, which is usually all that is required. If anything whiter is needed, it is a simple matter to strengthen the lettering by going over it with some India ink and a fine brush, which is easy enough when once we have the reversed lettering on the film to act as a guide. It will be found that, if the title is a large one, the paper may absorb so much moisture from the negative as to wrinkle up and so interfere with the proper setting off of the ink. This can be remedied by steaming the paper well before rubbing it down, or even by putting it face upwards on a piece of moist blotting-paper for a minute or two; in fact, until it has no longer the curl which the moist paper gives it at first, but lies quite limp and flat.

Photography and Focus.

Chloranol as a Developer

WE have already shown in a previous article that, thanks to the acid character conferred by its two phenolic groups, hydroquinone can be combined with developers of a basic nature, such as paraphenylene-diamine and methylparamidophenol (metol), producing well-defined products endowed with developing-properties superior to those of their components. Among these combinations the one we have called "metoquinone" holds to-day an important place among developers.

We have studied a number of derivatives of hydroquinone with the object of determining their aptitude to react upon the metol and produce metoquinone substitutes. Among these products our attention was first attracted by sulphonic hydroquinone and chlorhydroquinone. Our experiments with sulphonic hydroquinone proved fruitless, but with chlorhydroquinone we obtained results which led to a perfectly-defined crystal combination to which we have given the name "Chloranol."

Chloranol dissolves in water at 65 degrees F. in the proportion of two percent; it is consequently twice as soluble in cold water as metoquinone.

Notwithstanding its energetic reducing-power, chloranol is remarkable for its inoxidability in the air. Its aqueous solutions keep excellently when exposed to the air, even in the absence of alkaline sulphite. With the sulphite they keep still better, and do not change

even in uncorked bottles, preserving virtually the same inoxidability when the alkaline carbonate is added. This remarkable resistance of the solutions to oxidation by the air seems to be due to the presence of chlorine in the molecule.

Chloranol possesses very interesting developing-properties, quite similar to those of metoquinone. It may be used in a simple solution with sodium sulphite, but in this condition its action is not so rapid as that of metoquinone. It also gives negatives quite free of fog, but a trifle more contrasty than the latter agent.

We have adopted the same formulae for the new developer as for the metoquinone, the result differing only in a slight increase in contrast and a less bluish color of the reduced silver than with metoquinone. Developing-solutions of chloranol are even less changeable in the air than those of metoquinone, which itself has a remarkable resistance to oxidation.

We give below two formulae for developers:

A. For time negatives:

Water	1000 c.c.s.	35 ounces
Chloranol	5 grams	70 grains
Sodium sulphite (dry)	30 grams	1 ounce

B. For normally-exposed negatives:

Water	1000 c.c.s.	35 ounces
Chloranol	5 grams	70 grains
Sodium sulphite (dry)	30 grams	1 ounce
Potassium bromide (ten percent solution)	10 c.c.s.	140 grains
Sodium carbonate (dry)	5 grams	70 grains

In this formula the sodium carbonate may be replaced with 10 c.c.s. of acetone, or both sulphite and carbonate by 30 grams (1 ounce) of formosulphite. For underexposed negatives, dilute one part of solution B with two parts of a solution of sodium carbonate, 5 grams to the litre (60 grains to the quart). For overexposed plates use developer A, adding from 2 to 20 c.c.s. (1 to 5 drams) of a ten percent solution of potassium bromide, according to the degree of overexposure. Concentrated developers may be made with the chloranol in acetone with sodium sulphite. Developers for slow plates and papers may be made in the same proportions as for metoquinone.

In a word, chloranol constitutes a new developer possessing interesting qualities, especially that of developing virtually in the presence of sodium sulphite alone, without alkaline carbonate. Its developing-properties are very nearly the same as those of metoquinone, but a little less energetic. Moreover, it has the advantage of being more soluble in water than metoquinone, giving solutions that keep without appreciable alteration even in the absence of sulphite. — *A. and L. Lumière and A. Seyewitz in the Bulletin de la Société Française de Photographie.*

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Temple of Childhood

EARLY in December a despatch was sent to the Editor from St. Louis headquarters to the effect that arrangements were being made whereby the privileges, now enjoyed by the official photographers of the Temple of Childhood, would be extended to all photographers. If this promise is carried out, everybody ought to be happy. When the doors are thrown wide open, without restriction, competition will be lively, indeed, and a monopoly will no longer exist.

Panama-Pacific Impostors

THERE are now working in the eastern cities—and probably elsewhere in this country—solicitors who profess to represent the Sullivan Publishing Company, of Chicago, and seek permission to photograph offices and factories for the purpose of making lantern-slides. These slides, they assert, are to be given extensive prominence at the Panama-Pacific Exposition in advertising the industries of the East. The pictures are made without expense to the owner of the office or factory. As no such firm as the Sullivan Publishing Company can be located in Chicago, the matter was brought to the attention of the Exposition authorities, who reported that no concession had been granted to give prominence to lantern-slides at the Exposition, nor had they ever heard of the Chicago concern referred to.

Manufacturers and office-managers are warned against solicitors of this sort. It is an old game, the scheme being to photograph the office or factory and sell the prints to the employees. But patience; the tribe will soon be on the increase, for the American people do love to be swindled.

Photographers' Copyright League

ARRANGEMENTS have just been concluded to retain Mr. Benno Lewinson as General Counsel for the Photographers' Copyright League of America. All members requiring advice in copyright matters may communicate with him by mail or call upon him at his office, 119 Nassau Street, New York City. Whenever a suit is necessary to protect their rights, Mr. Lewinson will represent them in court, co-operating with local attorneys when the litigation is not in New York.

Mr. Lewinson has been a member of the New York Bar since 1877, was elected Vice-President of the New York Law Institute in 1899, was one of the trustees of the College of the City of New York in 1907-08 and is now one of the directors of the New York County Lawyer's Association. He has had an extended experience as referee and as condemnation commissioner, but his specialty has been copyright and trade-mark practice, in which he has achieved much success.

The Copyright League now has a legal department to be proud of, and its services may be had free of charge by any member. Those photographers who have delayed joining for the lack of this service should now send their applications at once with dues to Secretary-Treasurer, William H. Rau, 238 South Camac Street, Philadelphia. The dues are only \$1.00 a year.

B. Y. M. C. U. Camera Club Exhibit

THE annual photographic exhibition of the Boston Young Men's Christian Union has become an important event. The camera club connected with this society is fortunate to have the inspiration of a group of earnest and skilled workers who at once encourage, instruct and lead the way. Just how much this means to the success of the enterprise is best shown by the steady improvement of the average standard of excellence from year to year. So competent to judge his own work impartially has every member become, that this year every print entered was hung by the committee, and it would be a rigid exclusion, indeed, which would deny a place to more than a dozen out of about two hundred prints.

Awards were made in five classes by a jury consisting of Cyrus Dallin, the eminent Boston sculptor, Harold A. Thurlow, a designer of high repute, and Phil M. Riley, Associate Editor of PHOTO-ERA.

Landscape: First Prize, "A Winter Landscape," F. W. Hill. Second Prize, "The Pearl of Orr's Island," F. W. Hill.

Marine: First Prize, "The Breaking Waves Dash High," F. W. Hill. Second Prize, "The Wharf," Arthur Hammond.

Portraiture: First Prize, "Study," Chas. Keller. Second Prize, "Study," M. L. Vincent.

Genre: First Prize, "An Earnest Student," Arthur Hammond. Second Prize, "Devotion," Chas. Keller.

General: First Prize, "Who Are You?" Dr. H. D. Hutchins. Second Prize, "Chrysanthemums," Chas. Keller.

William Shewell Ellis in Boston

WHEN William Shewell Ellis, of Philadelphia, called upon the Editor shortly before high noon, November 29, and accepted his invitation to luncheon at the Boston Art Club, he was astonished to find himself participating in a ceremony which proved to be a bright page in the history of the Art Club. He was witness to the inauguration of the Artists' Room, the only one of its kind in the city of Boston. Ever since the foundation of the club, in 1855, the artists have mingled with the laymen, moving freely through the club-house, which had its obvious advantages. Nevertheless, a special apartment—a sort of retreat amid Bohemian freedom and relaxation—seemed to be something that the artist-members needed, and with this end in view, the club assigned them the exclusive use of one of the best rooms in a quiet part of the club-house. A distinguished artist-member, Frank H. Jackson—now of London, England—designed decorations and fittings for this room, had them tastefully executed, and promptly at high noon, November 29, the apartment was dedicated and occupied by the artist-members of the club.

The ceremony took place amid great rejoicing and in the presence of eminent artists, laymen and invited guests. Valuable and appropriate gifts were on view, a special collection of pictures by club-members hung on the walls, and a unique repast served to impart the spirit of a Künstler-Leben, auspiciously begun and to be pleasantly perpetuated.



JOHN I. HOFFMAN, SECY. P. A. OF A.

WILL H. TOWLES

BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices.

PHOTOGRAPHY BY ARTIFICIAL LIGHT. By Dr. E. Holm. Second, enlarged edition, revised by Hermann Schwarz. 79 illustrations. In German. Price, postpaid, 2.75 Marks. Berlin: Union Deutsche Verlagsgesellschaft.

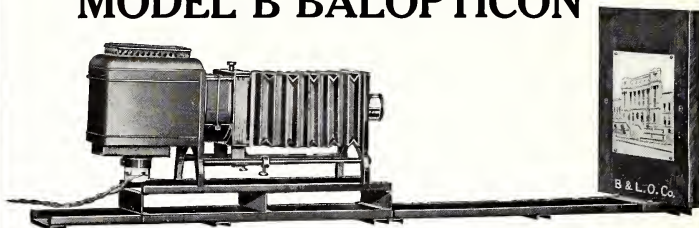
In this exceedingly useful volume, the author exhibits a thoroughly practical knowledge of an important subject. The latest forms and methods of procedure are presented with admirable clearness, and aided by cuts of standard appliances. In nineteen chapters are discussed the history of artificial illumination; the character and utility of the various artificial light-sources — all confined to magnesium: the pure, powdered metal and the explosive mixtures; the proper arrangement of equipment and models; selfportraiture; Rembrandt-lighting; groups; interiors; exposures with combined day- and artificial-light; the necessary amount of magnesium-powder;

home-made magnesium-lamps; the technique of the process — lens, focusing, lighting of apartment before and after exposure, combined use of several lamps, smoke-removal, copying, etc.; analysis of the illuminant; various kinds of flashlight-lamps; explosive compounds; illuminants for prolonged exposures (2 to 120 seconds); cartridges, etc., ready for instant use. It is gratifying to find so complete and trustworthy a guide to this popular method of photography and, although printed in German, the work commends itself to every flashlight-worker, regardless of nationality.

GERMAN CAMERA-ALMANAC. Volume IX. A Year-book of modern photography. Edited by K. W. Wolf-Czapek. 163 illustrations. Price, paper-cover, 4.50 Marks, postpaid, 5 Marks. Berlin: Union Deutsche Verlagsgesellschaft, 31 Blücher-strasse.

The current edition of this excellent annual, thoroughly German in character, differs from preceding issues in that illustrated articles by well-known specialists constitute its principal contents. Among these twenty-one well-written papers are Composition in Landscape-Photography, Karl Weiss; Decorative Application of Photography, Anna Hertwig; Gum and Oil, Peter Oettel; Night Pictures, Ernest Linck; Notes on

Enlarging and Lantern-Slide Making with MODEL B BALOPTICON



Model B Set Up for Enlarging (with Incandescent Lamp)

Three Outfits in One:

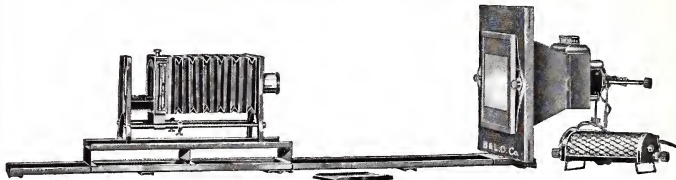
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LONDON LETTER

CARINE AND WILL A. CADBY

NEARLY the last of the evening-lectures at the Salon was a very amusing one by Mr. Charles E. Dawson on "The Eternal Feminine in Photography." Mr. Dawson's attitude towards this elusive and mysterious subject was most business-like and his audience seemed to enjoy the joke thoroughly. Among the slides he showed were some of the death-masks of the girl who was found drowned in the Seine. Probably death-masks of famous men—Shakespeare, Michelangelo, Napoleon, are as well known over in the States as they are here, where one sees them in most studios. There certainly is something fascinating and sphinx-like about them. Mr. Bertram Park, the secretary of the London Salon, has produced some interesting studies by taking photographs of one in different lightings, and it is curious to see what varied expressions can be suggested by altering the play of light and shade on the face. It opened up all sorts of fresh possibilities to portrait-photographers; for with one of Mr. Park's particular lightings the effect of a smile was produced; and a real, unselfconscious smile is, as we know to our cost, one of the hardest things to get.

On October 28 Miss Helen M. Murdoch gave her lecture at the Royal Photographic Society on the making of autochromes. This meant a great deal of work for her as her slides, being too large for the lantern, she had to make duplicates, and this is not altogether an easy matter when it is a question of autochromes and getting exactly the same renderings of the colors. Her lecture and these slides were received enthusiastically, and we have seldom seen a more sympathetic audience. Miss Murdoch just chatted in an informal way, telling little incidents that occurred when she was getting her photographs and calling attention to their weak spots in just as candid and natural a manner as she did to her successes, and her confiding and easy style simply disarmed criticism.

She had some interesting and quite unconventional portraits of the naturalist, Mr. Muir, and the geologist, Mr. Burroughs, whom she had the good luck to meet up in the mountains. Some of her other portraits were good work and full of rich color; the one that, perhaps, most impressed us was that of a Spanish dancer.

There is, at present, an exhibition at the Royal Photographic Society of photographs by members of the Nature Photographic Society and very interesting some of them are. "The Gray-leg Goose," by Oliver G. Pike, and "A Study of a Swan," by Edward J. Jacob, were ones that appealed, perhaps, mostly to non-members. It is an exhibition that illustrates the old story, "Eyes and No-eyes," and it is a little humiliating to feel such a thorough "No-eyes," that one wants to get one's eyes opened and be able to see more of the interesting workings of nature.

We are astonished that one who knows London as well as Mr. Coburn, should make such a slip—in the introductory notes of his book, "Men of Mark"—as to write of his time at Frank Brangwyn's studio as happening in pre-underground days. Of course, we had an underground railway around London fifty years ago, and a very dirty and unpleasant mode of traveling it was. Probably Mr. Coburn was referring to the electric tubes, that are of comparatively recent date.

Mr. Coburn in his preface to the above-mentioned work quotes Bernard Shaw's criticism of the portrait of

Chesterton—"Our Quinbus Flestrian, the young man mountain, a large and bounding gigantically cherubic person, who is not only large in body and mind beyond all decency, but seems to be growing larger as you look at him. . . . Mr. Coburn has represented him as swelling off the plate in the very act of being photographed." Chesterton seems to afford every one amusement as well as instruction, and even *Punch* in the current number pokes fun at his size by remarking what spacious quarters the Camera Club must have as amongst its exhibits at the present moment are three enlargements of Mr. G. K. Chesterton!

Talking of the Camera Club reminds us that lately Captain H. G. Lyons—late Director-General of the Egyptian Survey—gave a very interesting lecture at the rooms of the club in which he said, among other things, that a girl's body, taken from an ancient tomb at Assouan, was so well preserved that the anatomists were able to prove she had died from appendicitis, demonstrating that the fashionable illness of the present day was prevalent thousands of years ago.

The present exhibition at the Camera Club is composed of a collection of photographs of "Poets and Publicists," by Mr. Hector Murchison. Space prevents a detailed account of this show, which is filled with interest both from the photographic and literary points of view, and we hope to refer to it next month.

We hear from Messrs. Kodak, Limited, that, just before the closing date of their big money-competition, a large number of entries was received. The photographs are only now indexed and, although they still hope to announce the prizes before Christmas, the exhibition of the winning prints will be deferred till the spring.

Photograms of 1913 is out. In the old days we used to look on this publication as a most useful index and map of the year's work. Mr. Mortimer, the editor, has set himself for the second year in succession to make it not only this, but an artistic record—one that must be valuable all the world over. The get-up is the same as last year's which was fully dealt with in this letter, in January last, and the reproductions are, if possible, better still. Indeed, in one or two cases they are distinctly more satisfying than the originals!

A Lens Stolen

A PORTRAIT Unar lens No. 853319 is reported stolen from F. R. Shiffert, 1930 Fillmore Street, San Francisco, Cal.

Beatrice Bell's Color-Work

MISS BEATRICE B. BELL, who won the first prize in the PHOTO-ERA competition in hand-colored photographs, last spring, has recently captured a gold medal for a collection of pictures at the California State Fair.

Toronto Camera Club

It is announced that the Annual Salon for 1914 will be held the week of April 27 to May 2, inclusive. A Gold Medal will be awarded to the best print in the Salon, and Silver and Bronze Medals to the first and second in the following classes: Portrait, Landscape, Genre and Marine.

At the last meeting the following officers were elected: Hon. Pres., Hugh Neilson; Past Pres., Edwin Utley; Pres., J. Y. S. Ross; First Vice-Pres., A. Kelly; Second Vice-Pres., A. G. Fraser; Sec.-Treas., Edward Y. Spurr; Executive Committee, E. W. Hendrick, A. S. Bowers, M. Leverty, J. F. Howitt, A. Van. Edwin Balfour.

BERLIN LETTER

MAX A. R. BRÜNNER

If we compare the paintings of the old and the new masters, we shall notice a difference in several respects. In recent times a style has become popular which is known under the terms "Secession," "Post-Impressionism," "Cubism," "Futurism," and "Synchronism." In photography similar attempts are being made; for quite lately some Italians have tried to apply futuristic principles of representation to photography. Many may look upon it with wondering eyes, just as in the art of painting, these innovations have found objectors; but it would be wrong to ignore the matter with a smile as many people do with things which they do not understand.

Going deeper into the matter, we find that many a fertile idea is contained in the new methods. We could see the guiding idea of futurism in the idea that it embodies the temporal dimension in the picture as the fourth dimension, so to speak. One of the resources of photographic futurism, which is appreciated also in the decorative art as a means to improve the effect, is repeating one and the same thing several times, which will result in a similar improvement as regards artistic character. The particular representations are not identical; but in their variety they express the type of movement, viz. the rhythm of it. If, for instance, we snapshoot a walking man on the same plate, opening and closing the shutter four or five times during his walk, we obtain not only several positions of the legs and body, but various distances of the pictures from each other, and thus the rhythm of the stepping forward is demonstrated. This kind of picturing a moving object resembles cinematography somewhat; but the vital difference lies in the fact that here the pictures are not to be looked at, one after the other, as on the screen; but they are to act upon the eye in their variety — all at the same time. Moreover, not nearly so many exposures are made in a second as by the cinematographic camera, but only a few; and we are thus enabled to select some which characterize a typical movement. Thus we may photograph a smoker, (1) when he seizes the matchbox (2) when he strikes the match on it (3) when he lights the cigar and (4) when he throws away the match, the whole thing being done in one or two seconds, and on one plate. Care must be taken that one picture does not obliterate or obscure the other, which is not easy, as the highlights of the first exposure may be at the same spot during the second exposure. Certainly there are many interesting problems to catch various moments of motion in this way. Besides, looking over the finished print, we have a chance to see what moment represented is the most original or artistic, and we should require the model to assume exactly the same position or movement and then make another but single exposure on a fresh plate. In any case, attention should be paid to a correct lighting and a suitable background. Those who are familiar with paintings by futuristic artists will comprehend more easily what the point is, and by what medium the desired effect can be obtained. An automatic sector shutter which need not be wound up, but opens and closes automatically by pressing upon the release, is best suited. The shutter's pointer must be moved upon mark B (bulb).

Our photographic industry has lately looked upon America with more than ordinary interest, as from the

democratic president, Mr. Wilson, a revision of the high tariff was expected. Until recently a tax of 45 per cent was placed on our cameras and lenses and 25 per cent on dryplates. The result has been that our factories were scarcely able to export their good products to the States, some having even been forced to erect manufacturing plants abroad. Now there is much joy among our makers of various photographic articles as on lenses a tax of only 25 per cent is levied, and on cameras, dryplates and raw paper only 15 per cent. Indeed, during the few months that the new tariff has been in force, most factories report an increase of exports to the United States. That country has at last done what we did years ago, for American manufacturers had never reason to complain of a high tax for the various articles which they exported to Germany which applies virtually to all industries.

A color-photography competition has just been announced by the Société Française de Photographie, which requires pictures from autochrome, diptichrome, omnichrome and similar plates. All amateurs and professionals, whether members or not, are permitted to compete, the closing date being April 15, 1914. Prints must be sent to the above-named society at 51 rue de Clichy, Paris. (Complete information regarding this competition will be found on page 325, PHOTO-ERA for December, 1913. — *Ed.*)

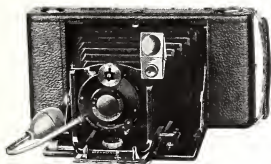
The writer attended recently a meeting of a prominent photographic society where a lecture was given on the proceedings of the jury during exhibitions. The purpose of the lecture was to educate from both artistic and technical viewpoints — the exhibitors and the public. The jury should show not only how a picture is rendered well, but how the exhibitor ought *not* to work — in other words, point out the actual defects of the picture. It happens quite often that the judgment of reliable and experienced photographers is quite different from that of the jury. The reason may be found in the fact that many lack the fine feeling which enables them to distinguish the average trash from a really good work. When the exhibition is over we learn that A got the gold medal, B the silver medal, and so on; but no one knows why. The critics in the trade-journals seldom touch upon this tender subject, and too few prize-winning prints are reproduced; besides, photographic editors usually consider only the *good* works and not the *bad* ones, although we could learn from the latter just as much. Certainly there is many an amateur or professional who got, say, a silver medal and is eager to know why he did not get the gold one, and why not the bronze one. But he never learns the real reason, and much of the educational value is thus lost. Yet where there is no critic, there is no progress.

Department of Photography, Syracuse University

With the beginning of 1914, the Photographic Department of Syracuse University will move into a new building, which has been built expressly for it. Students will then be permitted to enter for special courses.

The Wollensak Optical Company, of Rochester, has presented the college with a Verito soft-focus lens, fitted with a studio-shutter; Messrs. Schering & Glatz, a supply of their Assur Colors, Duratol and other chemicals; The C. P. Goerz American Optical Company, a 14-inch Celor lens with a compound shutter; Schott & Genossen, the manufacturers of the famous Jena glass, complete samples of all the raw materials used in making the glass, with a large variety of optical glass; Carl Zeiss, several text-books and other literature written by the members of their scientific staff.

INTRODUCING OUR MASTERPIECE



No. 3A FOLDING INGENTO

Models 1 and 2

For Pictures $3\frac{1}{4} \times 5\frac{1}{2}$ Inches

Into this camera we have put our best thought, best experience, best material and best workmanship. It is our masterpiece, the realization of our ideal of what a folding camera should be.

The No. 3A Folding Ingento embodies every advantage that a compact folding camera should have. Its distinctive features are: A $2\frac{3}{4}$ -inch bed track and U-shaped standard, ensuring absolute rigidity of the lens-standard. A rising, falling and laterally-shifting front, which gives the maximum movement in each direction.

A rack and pinion built into the bed. An automatically aligning focusing-scale. The lenses are carefully tested rapid symmetricals. The shutter is the famous Ilex General on the Model 1 and Ilex Universal on the Model 2. The body is of aluminum, covered with levant-grain cowhide leather. Dimensions of camera, $1\frac{7}{8} \times 4\frac{11}{16} \times 9\frac{5}{8}$ inches. Weight 36 ounces.

PRICES

No. 3A Folding Ingento, Model 1, with Ilex General Shutter . . . **\$20.00**

No. 3A Folding Ingento, Model 2, with Ilex Universal Shutter . . . **25.00**

Manufactured and Guaranteed by

BURKE & JAMES, Inc.
242-244 E. Ontario Street
CHICAGO

New York Office and
Salesroom
225 Fifth Avenue



PERFECTION

OF THE

M. Q. Tube

THE OLD WAY



You lose some of the necessary chemicals also, have bits of broken glass in your developer.

The "Agfa" Way



Soft lead ends, and no corks. Contents run freely from the tube. 10 ounces developer, 5 cents.

Ask your dealer for the
"Agfa" M. Q. Tube.

Berlin Aniline Works

215 Water Street, New York

When Ordering Goods Remember the PHOTO-ERA Guaranty

The "No-Trouble" Paper



A
R
G
O

Easy to Use—In every particular the manipulation of Argo has been simplified, so that the veriest beginner in photography may make good prints with it. The amateur who is farther along makes prints with Argo which cannot be excelled.

Easy to Buy—Over 2,700 Argo stations will sell you what you want—don't take anything else. If you don't locate your Argo dealer readily, ask us for his name. Where there is no dealer thus far established, we will sell you direct from our nearest branch, prepaying mail-charges.

We Want to Make it Convenient for You to Buy ARGO

Defender Photo Supply Company Rochester, New York

BOSTON - Rich Building, 220 Devonshire
Street, corner Franklin
NEW YORK - 13 West 29th Street
PHILADELPHIA - 112 Chestnut Street
PITTSBURGH - 2005 Jenkins Arcade Building
TORONTO, CAN. - 102 Stair Building
CLEVELAND - 505 Cuyahoga Building
CINCINNATI - Andrews Bldg., 5th & Race Sts.

CHICAGO - 121 N. Wabash Avenue
ST. LOUIS - Nat'l Bank of Commerce Bldg.
MINNEAPOLIS - Reid corner 9th Street and
Nicollet Avenue
SAN FRANCISCO, Aronson Building 3d and
Mission Streets
LOS ANGELES - 200-209 Broadway Central
Building

WITH THE TRADE

Projection-Apparatus

A GREAT variety of apparatus pertaining to every phase of lantern-slide making and projection as well as to the taking and projection of motion-pictures will be found in Catalog A, issued by Burke & James, 242-244 East Ontario St., Chicago. Before purchasing anything of such a character procure this booklet.

Increased Use of Euryplan Lenses

It is gratifying to note the growth in popularity of meritorious articles. The Euryplan lens is a case in point. Having been on the American market only a relatively short time, it now enjoys a wide circle of enthusiastic users. This we know because of the frequency with which pictures made with this lens are entered in the monthly prize-competitions of PHOTO-ERA. In the October issue two subjects by Howard S. Adams were particularly eloquent examples of its merit. Any of our readers who are interested in a high-grade anastigmat at a moderate price should send to Ralph Harris & Co., 26 Bromfield St., Boston, for particulars.

Aucelo Flashlight-Powder

THOSE who read the advertising-pages carefully will find the announcement of the Photo-Chemical Co., 3041 Cortland Street, Chicago, on another page. Tests have proved that this powder gives a very actinic light and a quick flash, yet is safe to handle and gives off very little smoke. It is put up in cartridges for home use; also in one- and four-ounce packages.

Assur Colors

IN a circular issued recently by Messrs. Schering & Glatz, of New York, a series of opinions concerning the Assur Coloring-Method is given by professional photographers, amateurs and artists, which would prove that this new method of coloring photographs is the simplest and most effective on the market. Even those who have but little knowledge of the use of colors, are in a position to color their photographs effectively; and because the colors can be removed readily with turpentine without the least injury to the print, several attempts may be made on one photograph, should the first one not satisfy the artist.

Those of our readers who are not using the process already, should obtain the directions for use, and the circular which contains opinions, from Schering & Glatz, 150 Maiden Lane, New York.

Charles H. Chase's New Store

FOR a number of years past Mr. Charles H. Chase, dealer and photo-finisher, has occupied a basement store, at 63 Bromfield Street, Boston; but in spite of this serious handicap, Mr. Chase did an excellent business, for he kept an up-to-date store, his methods were praiseworthy and his finished work was noted for its high quality. He recently moved into a neat and brand-new store, on the street-floor of 40 Bromfield Street, obliquely across from his old stand. He will make it interesting for his competitors in the neighborhood.

Ica Cameras Selling Fast

THE American agents of the Ica cameras inform us that their business has increased to such an extent that they have found it necessary to take larger quarters. They are still at 235 Fifth Avenue, on the same floor as formerly; but their premises are enlarged and now display their products to better advantage. Their show-room, particularly, is splendidly arranged and PHOTO-ERA readers, who may reside in or expect to visit New York, are cordially invited to call upon them and inspect as complete a line of cameras, lenses and photographic accessories as may be found in America.

The Duchess Camera-Equipment

THE high-grade anastigmat lenses have certainly made more practical the manufacture of small cameras. It has always been the custom in the past to imagine a focal-plane shutter with a high-grade equipment to be something large and cumbersome, and inconvenient to be carried about. This has all now been obviated as exemplified in the Duchess Camera and illustrated in the advertising-pages of this issue. The size of the negatives is $4\frac{1}{2} \times 6$, which are excellent proportions for making enlargements. These cameras can be obtained of your dealer, or direct from G. Gennert, 24-26 E. 13th St., New York; 320 S. Wabash Ave., Chicago and 682 Mission St., San Francisco.

A Novel Bargain-List

To Charles G. Willoughby, the well-known photo-supply dealer at 810 Broadway, New York, belongs the credit of issuing a bargain-list clearly in the interests of the purchasing-public. He states the benefits, rates and method of using the parcel-post, particularly as adapted to mail-orders of photographic supplies. He likewise gives a few valuable hints as to what dealers *not* to patronize, a policy somewhat in line with that expressed by PHOTO-ERA on several occasions. Mr. Willoughby is distinctly a man of business—alert, enterprising and strictly honorable in his dealings. The list is filled with real bargains. Be sure to ask for Bargain-list, No. 125.

What Goerz Lenses are Accomplishing

No doubt many amateurs have noticed that all of the prize-pictures—first, second and third—in the flower-photography competition reported upon in the November PHOTO-ERA were taken with Goerz lenses. This is not surprising, considering the long-standing reputation of these anastigmats and their popularity with pictorial photographers. The C. P. Goerz American Optical Company is now supplying a popular line of hand- and pocket-cameras fitted with their Dagor, Celor, Syntor and Tenastigmat lenses; but as a timely reminder to amateurs who prefer to improve their present outfits instead of making a complete change, we call attention to the fact that a Goerz Leus can be fitted to Kodaks, Ansco's, Seneacs—in fact, to any hand-camera of adjustable bellows-extension. Ask your dealer about it, or write direct to the Company whose advertisement appears on another page.

ALTHOUGH watercolors are more commonly used for coloring photographs, there are many advantages in using oil-colors. The latter course is rapidly becoming more popular, yet strangely enough the photographic press has given but little attention to it. The article by Lehman Wendell, on page 11 of this issue, is the latest authoritative word on the subject and should stimulate wider interest in this easy and pleasing method. Those who desire to see in their colored photographs the brilliancy and correct color-rendering which only oil-colors will yield may well correspond with F. W. Devoo and C. T. Reynolds Company, 101 Fulton St., New York. This firm is one of the oldest and best-known manufacturers of oil-colors and artists' materials, and it is a pleasure heartily to recommend such a complete and meritorious line of goods.

Instanto Paper

At this season of the year most printing is done by gaslight and an inexpensive paper of splendid quality, such as Instanto, makes a strong appeal to everyone. The special trial-offer contained in an advertisement, elsewhere in this issue, should have the attention of all camerists who do their own printing. Instanto is sold direct to the consumer; hence the low price. A trial demonstrates its high quality. Soft, hard and extra hard grades are supplied in regular weight, double weight and post-cards. Instanto buff, made in double weight and post-cards only, may be had in soft and hard grades. Your regular metol-quinol developer is suitable for making the trial.

The Wellcome Photographic Exposure-Record and Diary, 1914

THIS handy and popular little book, which has come to be a part of every amateur's equipment, has been issued for the year 1914. It contains a large amount of useful information, and its practical and trustworthy formulae which are recommended, call for ingredients made in tabloid form by the well-known English manufacturers, Burroughs Wellcome & Co.

An Unsuccessful Ruse

ANGERED because his advertisement was refused by PHOTO-ERA, a certain photographic dealer of unenviable reputation made up his mind to get even with the Publisher. Having tried unsuccessfully to obtain from him in writing the actual reason for declining the advertisement, or even an oral statement in the presence of other persons, to enable him to bring an action for damages against the resolute publisher, the dealer adopted an ingenious scheme to entrap him.

One day the Publisher received from an individual, quite unknown to him, a letter relating a pitiful story of how he had been swindled by this particular dealer by reason of a glowing advertisement he had seen elsewhere. The equipment, ostensibly high-class, was sent on approval on receipt of the amount, proved to be absolutely unsatisfactory and was returned to the dealer, but the amount deposited was not refunded to the customer. Every effort to get satisfaction was futile. The alleged victim concluded by asking the Publisher of PHOTO-ERA to state confidentially his honest opinion of that dealer's character and methods, who answered by referring the writer to the publisher who printed the dealer's advertisement. What the dealer's next move will be, is a matter of speculation.

UPON request the Conley Camera Co., 507 Main Street, Rochester, Minn., will be glad to send a catalog of its line of cameras and photo-accessories to any reader of PHOTO-ERA. Cameras of many sorts are included; view, folding and box-cameras supplying almost every need of amateur or professional.

The Model B Balopticon

DEVICES which can be used for more than one purpose are doubly welcome. Prominent among such is the Model B Balopticon for enlarging and lantern-slide making, either with incandescent electric or arc-lamp. The latter is a compact hand-adjusted type, using small carbon-pencils, yet giving a steady, brilliant light. No special wiring is required, the lamp being plugged into any chandelier or wall-bracket. This Balopticon is a simple, well-constructed instrument and sells at a moderate price.

The Ansco V. P.

NEVER in the history of the photographic industry has there been such a great large demand for small high-grade cameras; nor, for that matter, has there been such a large supply. The Ansco V. P. stands comparison with them all, and just now seems to be the best-seller in the Ansco line.

The "No Trouble" Paper

THIS is an apt trade-slogan. Not only does it appeal to the buyer, but it tells the truth. The secret of Defender success and Argo popularity lies in the fact that Defender goods are always the same—uniformly good.

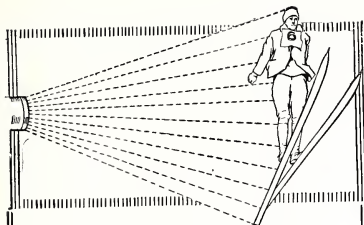
The Fastest Plate

AMONG new and interesting importations announced by Allison & Hadaway, 235 Fifth Avenue, New York City, is the A. & H. brand of Marion & Co.'s latest plate, said to be the fastest yet produced. It is claimed that practically every difficulty has been removed. The plates possess splendid latitude in exposure, are free from fog and have excellent keeping-qualities. The speed is registered as being 500 H. & D.

Samples of these plates and also the Marion P. S., a new professional plate giving exceptionally good results when white draperies are to be photographed, will be sent to newspaper and professional photographers making the request on their own letterheads.

The "Baby" Sibyl Camera

THE importation of this line of vest-pocket cameras, manufactured by Newman & Guardia, Ltd., London, places one of the simplest and most carefully-constructed of compact cameras within the easy reach of American camerists. This camera makes negatives $4\frac{1}{2} \times 6$ cm. or $1\frac{3}{4} \times 2\frac{3}{16}$ inches. Cooke, Zeiss- or Ross-Tessar lenses are furnished so that the printing may be entirely by enlargement, at the same time maintaining every desirable quality in the print. One of these cameras may be carried constantly on the person without inconvenience, making it a favorite with women. It possesses all of the most improved adjustments and is capable of the highest class of work. The camera is of metal construction throughout and covered with hard-grain morocco leather.

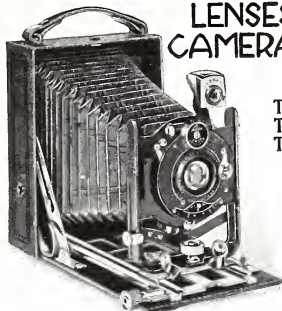


A Goerz Gets It Every Time

To be sure of a "steady run" of bright, snappy pictures you must have a camera—a lens—which asks no odds of light or motion.

GOERZ

LENSES CAMERAS



The
Taro
Tenax

unfailingly image action that the eye is not quick enough to see. And in any light where photography is at all possible, a Goerz lens insures pictures of excellent strength and detail.

Your dealer doubtless carries Goerz goods. If he doesn't, insist—he will get them for you now

This is the camera which has surprised the amateur and satisfied the expert. Takes sharp and distinct pictures (1 3/4 x 2 3/8) that give splendid enlargements.

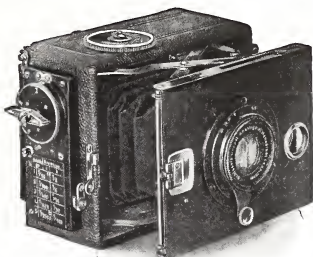
Send for booklet about
GOERZ Lenses—Cam-
eras—Binoculars

Vest Pocket Tenax



C. P. GOERZ AMERICAN OPTICAL CO.
323 1/2 East 34th Street, New York

"DUCHESS"



FOCAL-PLANE SPEED CAMERA

For Plates and Film-Packs

Size 4 1/2 x 6 C.M.

Overall Dimensions, 4 3/4 x 2 3/4 x 3 1/4 inches

A camera of exceptional capabilities, fitted with a selection of two high-grade Anastigmat Lenses and a self-capping focal-plane shutter. The shutter has a range of speeds from 1/2 to 1/2500 second, time and bulb exposures.

The OUTFIT is complete in every detail and includes camera and lens, six single metal plate-holders, film-pack adapter and velvet-lined black leather case to take all.

PRICE

"Duchess" Camera, fitted with Sylvan Double Anastigmat Lens F/4.5 including outfit as above \$60.00

"Duchess" Camera, fitted with Zeiss-Tessar Anastigmat Lens F/4.5 including outfit as above \$75.00

G. GENNERT

24-26 E. 13th Street - New York
CHICAGO - - SAN FRANCISCO

CLASSIFIED ADVERTISING

Thirty Cents per Agate Line. Minimum Four Lines. MONEY MUST ACCOMPANY ALL ORDERS. Forms Close the Fifth of Each Month Preceding the Date of Issue

PHOTO-ERA, 383 BOYLSTON STREET, BOSTON

BOOKS

INFORMATION? Bright, interesting and right up-to-date—a book on the making, taking and finishing of Motion-Pictures, also the Motion-Picture Camera and its construction, by a camera-man of twenty years' experience. Practical, not theoretical. Sent to anyone, postpaid, twenty-five cents. Ford's, Denver, Colo.

PHOTOGRAPHIC HANDBOOKS—The most compact and practical information ever printed for photographers is contained in our books at 10 cents each. "Retouching for Amateurs," "Secret of Exposure," "How to Take Portraits," "How to Make Enlargements," "Manual of Photography," "Practical Development," "Popular Printing Processes," "Hints on Composition," "How I Make Lantern-Slides." The nine for 75 cents. AMERICAN PHOTOGRAPHY, 218 Pope Bldg., Boston.

FOR SALE

FOR IMMEDIATE SALE AT BARGAIN CASH PRICES. One Newman & Guardia Special No. 7, 3½ x 2½ Sibyl Camera, complete with 12 plate-holders, film-pack adapter, ray-filter and carrying-case, etc., perfectly new. Price, \$65.00. Also one Goetz Tenax (new model) Color Lens, 6 plate-holders, film-pack adapter, compensation ray-filter, etc., all as good as new. Price, \$50.00; or will sell both together for \$110.00. D. F. CHARLTON, Marquette, Mich.

PHOTO-ERA ARTIST-MOUNTS in various colors and textures, 24 sheets in a portfolio 10 x 12½ inches sent for 35 cents postpaid. Detailed description on another page.

SITUATIONS WANTED

REQUESTS for Positions as Salesmen, Operators, etc.; also studios, photographic apparatus, etc., for sale or exchange, *cannot be advertised in PHOTO-ERA, unless accompanied by convincing proofs of the ability, character and business-integrity of advertisers unknown to the publisher.*

INSTRUCTION

"DADDY" LIVELY'S SOUTHERN SCHOOL OF PHOTOGRAPHY, at McMinnville, Tenn., opens Jan. 1, 1914. Special post-graduate course during February. Write for catalog. Endorsed by PHOTO-ERA as a thoroughly trustworthy institution.

MONEY IN PHOTOGRAPHY. You can start home-studio with your camera. We tell how. Details, portraiture, retouching, and sample pictures sent free. WELLS' STUDIO, East Liverpool, Ohio.

PHOTO-FINISHING

GET THE BEST LANTERN-SLIDE—Where? Write URI MELFORD, Lantern-Slide Exchange, Corning, N. Y., for catalog. Slides made from films, plates or prints. Trial order solicited.

LANTERN-SLIDES COLORED. Improve your slides by having them artistically colored. One slide colored free of charge, as a sample, on receipt of an order. Paper-prints and all sorts of color-work solicited. ANNE P. GAMON, 1629 Christian Street, Philadelphia.

PHOTO-ERA GUARANTY

PHOTO-ERA guarantees the trustworthiness of every advertisement which appears in its pages. Our object is to secure only such advertisers who will accord honorable treatment to every subscriber. We exercise the greatest care in accepting advertisements, and publish none which has not been proved desirable by the most searching investigation. Thus, in patronizing such advertisers, our subscribers protect themselves.

If, despite our precautions, the improbable should occur and a subscriber be subjected to unfair or dishonest treatment, we will do our utmost to effect a satisfactory adjustment, provided that, in answering the advertisement, PHOTO-ERA was mentioned in writing as the medium in which it was seen. The complaint, however, must be made to us within the month for which the issue containing the advertisement was dated.

WILFRED A. FRENCH, Editor and Publisher.

F. W. DEVOE & CO.'S ARTISTS' OIL-COLORS



Are scientifically "true colors" carefully prepared to meet the exact requirements of artists, by the largest and oldest color-making concern in this country.

FINE BRUSHES

As manufacturers we have given special consideration to the wants of oil and water-color painters. We manufacture every kind required.

For mounting photos, use only Indestructible Paste, the best kind made for this purpose

Send for Catalog

F. W. DEVOE & C. T. RAYNOLDS CO.
NEW YORK and CHICAGO

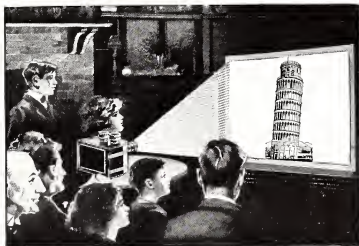
THE NINETEEN FOURTEEN

WOLLENSAK LENS AND SHUTTER CATALOGUE

WILL BE READY FOR DISTRIBUTION
FEBRUARY FIRST

SEND US YOUR NAME AND
ADDRESS NOW AND A COPY
OF THIS DISTINCTIVE BOOK
WILL BE SENT GRATIS

WOLLENSAK
OPTICAL COMPANY
ROCHESTER, NEW YORK



A Guaranteed Picture Machine at a Price You Can Afford

Have you been wanting a good picture machine, but felt the kind you desired was too high in price? The New 1914 RADIOPTICAN is the kind you want and the price is where you can afford it.

RADIOPTICAN No. 441, selling at \$17.50 and lighted by incandescent lamps, is guaranteed to equal in illumination and sharpness of screen image any similar machine (whether incandescent or arc light) at double its price. Other models at \$9.00 to \$45.00 are equally superior.

The RADIOPTICAN requires no lantern slides. It throws original pictures, post cards, clippings, on a screen, magnified many times and with all the color and detail perfectly reproduced. It works so successfully that every machine bears a guarantee tag that protects the buyer from disappointment.

Ask your dealer for a demonstration of the RADIOPTICAN. You'll be amazed at what can be done with incandescent lights when scientifically handled in a projecting lantern.

Write for Free Book, "Home Entertainments"

H. C. WHITE COMPANY, 509 River St., No. Bennington, Vt.
Less Gelatin and Sales of Optical Instruments for over 40 Years
BRANCHES: 45 West 31st St., New York San Francisco London

YOUR PRINTS WILL SPARKLE

YOU'LL be surprised at the wonderful improvement in your work if you make your prints on

INSTANTO

Answers every requirement of the amateur—rapid to print—lots of latitude—produces crisp, transparent prints, chock full of detail—and yet it costs you a lot less—Why?—Because you buy it

**DIRECT FROM MANUFACTURER PREPAID
ORDERS SHIPPED SAME DAY RECEIVED**

SEND 25c for three sample dozens of postals or 4x6—Three surfaces, Matte, Glossy and Semi-matte, each in hard, soft and extra hard grades. Make your selection. Full instructions, complete price-list, etc., will be mailed.

THE PHOTO PRODUCTS CO. (Dept. L)

(Exclusive Manufacturers of Photographic Papers)

6100 LA SALLE STREET, CHICAGO

When Ordering Goods Remember the PHOTO-ERA Guaranty

THE PHOTO-ERA "BLUE-LIST"

Reliable Dealers in Your City

AMATEUR PHOTOGRAPHERS

If you are looking for information or wish to buy, our lens-experts are always glad to talk lenses with you. We make a specialty of fitting high-grade lenses to Kodaks, Graflex and all other cameras. We do high-grade Developing and Printing. Largest Photographic Stock in the East.

ROBEY-FRENCH CO. 34 Bromfield Street
Eastman Kodak Company Boston, Mass.



TURN NIGHT INTO DAY

PHOTOGRAPHERS—You want to get this lamp. Don't BUY BEFORE GETTING OUR PROPOSITION. Description in new Bargain-List No. 155 NOW READY. Send stamp to-day. NEW TARIFF PRICES.

WILLOUGHBY, 810 Broadway, New York

BARGAINS

Closing out our slightly shop-worn and other cameras at very low prices. SEND FOR BIG LIST

THE GLOECKNER & NEWBY CO.

169-171 Broadway, 5 Cortlandt St., New York City

SECOND-HAND LENSES

ALL MAKES AND SIZES

Work just as well as new ones. Send for our bargain-list

St. Louis-Hyatt Photo-Supply Co.
St. Louis, Missouri

COPIES OF PHOTO-ERA WANTED to complete volumes for binding. Must be in good condition, both advertising and text sections. April, 1908; July, 1909; March, 1910. In exchange for each of these the publisher will send PHOTO-ERA for three months free. Address PHOTO-ERA, 383 Boylston Street, Boston, Mass.

GRAFLEX and KODAK HEADQUARTERS

Always a few used or shelf-worn cameras on hand at very attractive prices. Bargain-List No. A28 now ready. Send in your name.

OBRIG CAMERA CO.

A. C. Wilmerding 147 Fulton St., N.Y. W. E. Wilmerding

We handle all kinds of cameras. Korona, Seneca, Ansco, Reflex, etc.

OUR PRICES CANNOT BE BEATEN

Catalogs of cameras with discount-sheet, 5 cents. Photo-supply catalog, 300 pages, illustrated, 25 cents.

(A 25-cent credit-slip good with first order included)

New 4 x 5 camera, reversible back, rack and pinion, without lens, shutter or case, \$4 post-paid; with lens, \$5.75

Get our complete bargain-list; it's free. We will take your old camera or Kodak in exchange.

1000 postcards from your negative, \$10; 100 for \$2

WRIGHT, PHOTO-SUPPLIES RACINE, WIS.

DON'T BOTHER WITH SCALES

BUY SCALOIDS

These convenient developer-tablets are accurately weighed for you by Johnson & Sons. Just drop a pair into the required amount of water, crush them with a rod, stir and you have a fresh, active solution.

Sample box of Amidol or M.-Q. to make 40 to 80 ounces of solution mailed to any address on receipt of 30 cents.

Manufactured by **JOHNSON & SONS, England**

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Ralph Harris & Co., 26-30 Bromfield St., Boston
New York Salesroom, 108 Fulton Street

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Draped and from the Nude



63 reproductions in halftone in a handsome portfolio. For painters, illustrators, designers, decorators and art-students.

Price, express-paid
\$7.50

Original Photographs
Selected Subjects

12, 8 x 10 Prints, \$5.00
20, 5 x 7 Prints, 5.00

In neat portfolio
Express-paid

Published by
AURORA STUDIOS

PHOTO-ERA, Trade Agent

383 BOYLSTON ST., BOSTON, U.S.A.

A & H.

We beg to announce our appointment as Import Agents of the following Standard Foreign Lines:

Marion & Co.

Cameras, Plates, etc.

Newman & Guardia

Cameras

Newman & Sinclair

Cameras and Motion-Picture Apparatus

We shall be pleased to receive inquiries from those interested in these famous products.

We are manufacturers of the Panchroma Flash-Cabinet and the celebrated Panchroma Flash-Powder for Autochroms and various screen-plates on the market.

Send for our "NEW ABILITY TEST-CHART" in colors and test the efficiency of your present apparatus and your own knowledge in chromatic photography. *It is free.*

ALLISON & HADAWAY

235 FIFTH AVENUE, NEW YORK CITY

A & H.

A NEW FAST PLATE

The A. & H. importation of Marion & Co.'s (London), latest product, working at a speed of 500 H.&D. or 10% faster than the fastest.

Especially suitable for the use of newspaper and Professional Photographers who desire the utmost efficiency under the shortest possible limit of exposure.

Unlike other fast plates the A. & H. has excellent keeping-qualities, splendid latitude and is *free from fog.*

NOTE: In anticipation of the keen demand there will exist for samples of this superlatively fast plate we must, for the present, confine the distribution to those who write us under their own letter-heads or who enclose their business-cards.

Samples of the phenomenally successful Marion P.S. will also be sent if so desired.

Allison & Hadaway

Photographic Manufacturers and Importers

235 FIFTH AVE., NEW YORK

BUILDING AGAIN

**THAT'S ALL—
JUST NOW!**

MULTI SPEED SHUTTER CO.

**OFFICE
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Important Books Reviewed in Photo-Era During 1913

As there are some workers who read PHOTO-ERA irregularly, and who are much interested in books on photographic subjects, art and foreign travel, we print herewith a list of publications reviewed by the EDITOR during the past year, together with the names of the authors, and the month in which each review appeared. Our readers are assured that these books received favorable consideration by the EDITOR only because they possessed exceptional merit.

Orders for any of these books will be filled promptly at the published price and carriage prepaid (excepting the first three annuals), by the publisher of PHOTO-ERA, 383 Boylston Street, Boston, U.S.A.

Technical

Guide to Landscape-Photography	Fritz Loescher	\$1.10	June
Tank-Development (in German)	E. Blech .....	.38	July
Bromoil-Process (in German)	Dr. Emil Mayer .....	.50	Sept.
Pictorial Amateur-Photography (in German)	Peter Oettel .....	.75	Sept.
Sonny Boy's Day at the Zoo	Ella Bently Arthur	1.00	Dec.
Photography for Students of Physics and Chemistry	Louis Derr, A.M., S.B.	1.40	Dec.
Art of Retouching Negatives and Finishing and Coloring Photographs	Robert Johnson .....	.70	Dec.

Photographic Annuals

Photograms of the Year 1912	F. J. Mortimer, F.R.P.S.	\$1.43, paper, postp'd	Jan.
		1.93, cloth, "	
British Journal Photo. Almanac, 1913	George E. Brown, F.I.C. ....	.77, paper, "	Jan.
		1.37, cloth, "	
American Annual of Photography, 1913	Percy Y. Howe .....	.92 paper, "	Jan.
		1.45, cloth, "	
Photographic Art During the Year 1912	F. Matthies-Masuren	2.50	March
Agenda Lumière-Jouglà Co., 1913	Lumière-Jouglà Co. ....	.25	March
Year-Book for Photography and Reproduction- Technique (in German)	Dr. Josef Maria Eder	2.25	April
German Photographic Calendar (in German)	Karl Schwier .....	.50	April
Photographic Tear-Off Calendar (in German)	Wilhelm Knapp .....	.62	April
German Camera-Almanac, 1913 (in German)	K. W. Wolf Özapek	1.40	June

Art

Art-Treasures of Washington	Helen W. Henderson	\$3.00	March
Composition in Monochrome and Color	Arthur W. Dow	4.00	April
Photographic Figure and Drapery-Studies	Aurora Studios	{ 5.00	July
		7.50	
Art of the Wallace Collection	Henry C. Shelley	2.00	July
Pictorial Composition and the Critical Judgment of Pictures	Henry R. Poore, A.N.A.	2.00	July
The A B C of Artistic Photography	A. J. Anderson	2.50	Dec.
A Treatise on Art	John Burnet, F. R.S.	2.50	Dec.

Travel

Magnetic Paris	Adelaide Mack	\$1.75	June
Russian Empire of To-day and Yesterday	Neviu O. Winter	3.00	Aug.
Spell of the Italian Lakes	William McCrackan	2.50	Sept.
Winter-Sports in Switzerland	E. F. Benson	4.00	Dec.
Royal Castles of England	Henry C. Shelley	3.00	Dec.

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50 cents; for 35 cents. Composition in Portraiture, Sidney
Allan; \$3.00; \$2.50. PHOTO-ERA, 383 Boylston Street,
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The American Journal of Photography

Vol. XXXII

FEBRUARY, 1914

No. 2

PUBLISHED MONTHLY BY WILFRED A. FRENCH, 383 BOYLSTON STREET, BOSTON, U. S. A. Entered as Second-Class Matter June 30, 1908, at the Post-Office, Boston, under the act of March 3, 1879.

YEARLY SUBSCRIPTION-RATES

United States and Mexico, \$1.50 postpaid. Single copy, 15 cents. | Foreign subscription, \$2.25 postpaid. Single copy, 1 shilling
Canadian subscription, \$1.85 postpaid. | Agents for Great Britain, Houghtons, Ltd., London.

ADVERTISING-RATES ON APPLICATION

WILFRED A. FRENCH, Ph.D., Editor; PHIL M. RILEY, Associate Editor
KATHERINE BINGHAM, Editor, The Round Robin Guild

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CONTENTS

ILLUSTRATIONS

The Summit of the Chamossaire	Will Cadby	Cover
The Climb Before a Ski-Run	Will Cadby	54
After Sunset	Will Cadby	55
At the Top of the Hill	Will Cadby	56
The Ski-ing Girl	Will Cadby	57
Winter in Switzerland	Will Cadby	58
Ski-ers Homeward Bound	Will Cadby	59
The New Ski-Jump at Mürren	Will Cadby	60
The Summit of the Chamossaire	Will Cadby	61
Hoar-Frost	Will Cadby	62
A Good Run	Will Cadby	63
Carling — The Cup Finals	Will Cadby	64
The Skating-Rink, Mürren	Will Cadby	64
A Sunday Morning	Will D. Brodhan	66
Meditation	Frank Walcott	67
Landscape	Louis Fleckenstein	68
Nude in Net	William Shewell Ellis	69
Christmas Night	James Lewis	70
The Fighting Téméraire	A Painting by Turner	71
Norham Castle	A Painting by Turner	72
"O'er the Trackless Waste"	John Chislett	73
The Edge of the Clearing	Rudolf Eickemeyer	74
Among the Clouds	L. M. A. Roy	75
Leonard Ochtman	Pirie MacDonald	76
Friends	Joseph M. Rogers	77
Fountain, Public Garden, Boston	Charles H. Flood	79
The Shadow on the Wall	Maudie Jay Wilson	80
Budding Vanity	W. Rowe Lewis	81
Kapell-Brücke, Lucerne	Katherine Bingham	85
A Rainy Day in Orleans Alley — First Prize, Rainy Days	George Steele Seymour	86
The Shower — Second Prize, Rainy Days	Albert F. Snyder	87
Through the Mist — Third Prize, Rainy Days	John W. Gillies	88
A Path in Fairmont Park — Honorable Mention, Rainy Days	Karl Fichtner	89
A Man from the West — First Prize, Beginners' Contest	J. W. Heelmer	90
Turbulent Water, Lake Michigan — Third Prize, Beginners' Contest	James Allan	90
Irma — Second Prize, Beginners' Contest	Mrs. C. B. Fletcher	91

ARTICLES

Winter-Sports Photography	Will Cadby	55
Making Lantern-Slides at Home	Allen E. Churchill	65
Copying Up to Date	E. J. Wall, F.R.P.S.	71
The Amateur and the Photo-Supply Salesman	A. H. Beardsley	79



THE CLIME BEFORE A SKI-RUN
WILL CADBY



PHOTO-ERA

The American Journal of Photography

Vol. XXXII

FEBRUARY, 1914

No. 2



AFTER SUNSET

WILL CADBY

Winter-Sports Photography

WILL CADBY

ALTHOUGH many articles have been written and whole volumes of advice given on the best methods to photograph in the snow, we still see far too many results that leave much to be desired. Every discerning photographer must continually have noticed at quite good exhibitions such a title as "Sunshine on Snow," under a picture that would never, without the title, suggest any such thing; frequently it would not even with the title. "A Travesty of Moonlight on Chalk" would often suggest more accurately the thought that is uppermost when studying some of these ambitiously-titled photographs.

But here we are plunged immediately into the turbid waters of criticism. The originator

of the "Sunshine on Snow," will, of course, maintain that his picture really does suggest the title definitely, for he studied the subject carefully before he made the exposure, and he sees in his print what he deliberately aimed at in taking the photograph.

This is one of the big difficulties in photography. We all see in our own results something of what we tried for, even when so much of the vital element of it is lost that our most sympathetic friends hesitate in their criticism between untruthfulness or offense! Indeed, so conscious am I of this obsession of the author of a print as to its merits, that I should have been afraid to illustrate these notes with my own photographs, were it not that one or two



AT THE TOP OF THE HILL

WILL CADBY

friends—very possibly with a sacrifice of truth—have pronounced them . . . snowy! and every year some editors ask to use them.

Now this question of "snowiness" seems to me the very root of the whole matter. A photograph of snow-covered ground, or sports in a snow-covered country, must first and foremost suggest to the beholder that these conditions prevail in the scene that he sees depicted, and with the indulgence of the reader, I propose to point out one or two of the pitfalls into which I, at least, have tumbled in trying to get this result.

First of all, then, we generally begin by attempting too much. We are enchanted with the dazzling scene, in which the brilliant blue sky and the highlights on the glittering snow are absolutely beyond our reach, particularly so if we have some comparatively dark objects such as people in the foreground. We must remember that we are working in a black-and-white medium, and it cannot be stretched to take in these extremes and yet render them faithfully. We must compromise, as is usual in our craft, making sacrifices at one end or the other of the scale of gradation.

We struggle out of this first pitfall, not discouraged, but enlightened—as we think—

only to fall badly into the orthochromatic pit. A deep screen that will pull down those blue shadows and blue sky is what we want, and straightway use, and we shall probably be pleased for a time with our results. But with keener observation of our subject, we shall realize that we have overdone it. The snow-shadows are *not* black in nature; and the blue sky has none of the appearance of an impending storm, as our new rendering shows.

A little overcorrection for certain subjects is useful at times, as in the case of "The New Ski-Jump at Mürren," where the aim was rather to give a map-like representation of the surroundings of the jump than the suggestion of snow. Here I wanted to emphasize every track on the hillside, the tiny jump itself on the left, halfway up the picture, and the avalanche that had recently surged right across the steep "outrun." For this reason, in this case, I had made use of a K. II screen (Wratten and Wainwright).

But for ordinary purposes in the snow—that is, for obtaining a photograph that most nearly suggests the snow environment—I have found the K. I most useful. This screen, as perhaps American readers may not know, is a particularly light yellow which, with a panchromatic plate, requires only twice the unscreened exposure, and I have got excellent results with it in conjunction with ordinary orthochromatic plates by simply doubling the exposure. In fact, I have made a practice, at times, of keeping a piece of this unmounted thin gelatine K. I screen screwed in between the glasses of one particular lens, so that I never worked without it, as it was not in the way and yet always ready for use, and protected from finger-marks.

When once we realize that our camera has limitations, and that there are snow-aspects that it simply is not capable of rendering, and that in another direction the danger of overcorrection is very real, we shall have struggled through or avoided two of the most serious pitfalls in snow-photography, and we can pass on to consider how best to reproduce the familiar scenes and figures of a winter-sport center.

There are two ways to obtain photographs of people at play in the snow. One is to photograph indiscriminately anything and everything that appears to have possibilities in it, hoping that a few of the exposures may have attained the end, namely, a spontaneous picture. The other method is to pose the figures before a suitable background and deliberately take them. Both methods have their advantages, and not infrequently the posed picture will appear the more spontaneous and natural of the two. But it is not always possible

to arrange pictures in the snow, for it requires an intuitive, diplomatic and intelligent helper, and it presupposes docile "sitters" who can, to a certain extent, act. Most of us know that attitude and expression must always be overdone to show at all convincingly in photography. A subtle smile is lost on the dryplate and nothing short of a broad grin will suggest a smile. It is just the same with attitudes; they must be overdone or they give the impression of . . . no attitude at all.

This fact was impressed on me last winter when, in a rash moment, I undertook to expose some dozens of plates on a skating-expert to illustrate skating-turns for a book he was writing. The devotee of skating would not swerve a hair's breadth from the correct attitude, and the result was — at least to my untutored eye — that he did not show the turn he was wishing to illustrate, whereas if he would have consented to exaggerate slightly the attitude, the novice would have seen at a glance the movement required.

Of course, one of the advantages of a set picture is that the figures can be arranged so that they do not cover up or overlap each other in a meaningless fashion. The experts (also the good-looking ones) can face the camera, and those who are less convincing in both respects can be judiciously selected to fill up the background. Generally, the exact reverse happens if no preliminary posing is carried out. Then, again, we can get our figures large on the plate and yet focused accurately, which is always a difficulty with a hand-camera, where we are guessing distances and, at the same time, trying — often vainly — to compose a picture through a diminutive view-finder.

A combination of both methods is often satisfactory. A landscape can be arranged on the ground-glass with deliberation. We can decide where we require figures, get quite ready, and when suitable people come along pull out the slide and make the exposure as they are passing. "Ski-ers Homeward Bound" is an example of this sort of work. The two men had been noticed to approach. The camera was set up, the scene focused, and the exposure and exact position of the figures determined before their arrival. As they passed across the picture, the shutter was released, and they were not even asked to pause on their homeward journey. Incidentally they happened to be two of our most famous ski-jumpers, which was an exceptional photographic stroke of luck. But it is not often that we can get the right figures, the right landscape and, let me add, the right lighting — all at the same time.

As an example of deliberately-posed figures, I might call the reader's attention to a photograph of mine called "The Tumble," where a singularly good-tempered and obliging bevy of girls did almost too completely and automatically what they were told. There is none of the true spirit of winter-gaiety in such a picture.

"The Skating-Rink, Murren," was an entirely unpremeditated snapshot. Miss Elizabeth Asquith (the English Premier's youngest daughter) was waltzing on the ice with her cousin, Mr. Tenant. The side-light appeared effective and the attitudes good as they swayed backwards and forwards to the music, and so an exposure was made on a $3\frac{1}{4} \times 2\frac{1}{4}$ -inch film-pack with a camera that comfortably fitted a pocket. It will be noticed from the shadows in this photograph that the sun was shining across the lens, and if a sunshade had not been



THE SKI-ING GIRL

WILL CADBY



WINTER IN SWITZERLAND

WILL CADBY

used, the negative undoubtedly would have been spoiled. The necessity for a sunshade is naturally more important in the snow than elsewhere. It should be not only a sunshade, but a light-shade that entirely surrounds the lens, as there is much reflected light from the white ground that may often spoil an effect unless it is cut off. It is an easy matter to make a light-shade to fit each lens used. A tube of thin, black cardboard held on the lens by a rubber-band answers all purposes. Care must be taken that it does not extend too far so as to obstruct the view; but this can be adjusted exactly by looking through the camera and cutting back the funnel until it does not show on the ground-glass even at infinity. Personally, I have found a lens-shade one of the most useful accessories, and make a practice in the snow of never using the camera without it. Such things, of course, can be bought, but the home-made instrument is just as effectual.

So far we have discussed factors that are more or less within the control of the photographer. But there is one—and a most im-

portant one—that is beyond his power to manipulate. It is lighting. Very few persons are fully alive to the part that lighting plays in the making or spoiling of the subject. Of course, every one acknowledges in a superficial and uninterested way that lighting is important; but it is much more than this, it is all-important, and can ruin the most carefully-thought-out scheme for a picture. Sunshine, where not wanted, may throw a big shadow just where it will ruin the composition altogether, and yet the lack of sun may take all the sparkle and most of the perspective out of a view that needed it. Even the sun shining from the wrong direction will alter entirely the detail in the snow and, possibly, emphasize the very objects that we wished to reduce in importance, and flatten and make valueless the salient features of our picture. Consequently it is of the utmost importance to study the lighting carefully and watch how it affects the "drawing" of the snow.

One of the advantages of camera-work is that there is something to be done in almost every light, and this holds good particularly in the

snow. If the sun does not shine, and the atmosphere is not so dazzling as to make people screw up their eyes, we have excellent opportunities for portraiture. It forms a comparatively flat and most becoming light, and yet, with the surrounding snow, exposures can be short and expression retained.

"The Ski-ing Girl" is an example of portrait-photography with a snow-bank background.

On the other hand, if the sun had gone in when "Snow-balling," the December cover of PHOTO-ERA, was taken, the result would have been a flat, white expanse not at all suggestive of the material from which the young man's ammunition was made.

And yet, again, if the sun had been shining in a photograph of mine showing the telemark turn, the shadows cast would have decreased the diagrammatic value of the photograph in showing the position of the legs, with the weight of the body thrown forward in performing this fascinating evolution.

For the successful taking of sports-photographs on level ground—like a rink, where

people are to be included—it is simply imperative, by some means or other, to get a high viewpoint for the camera. Diffidence and shyness must be cast to the winds, and if there is no natural vantage-ground at the spot where it is required, the photographer must perch himself and his camera on a big box, or some such portable platform, or he will get his figures one behind the other and they will have a mixed-up appearance. It was only in this way that I was able to photograph the International Curling Bonspiel at Morgins-les-Bains (Switzerland) last winter. The reader has only to imagine the point of view lowered in the "Cup Finals" to realize how the traveling-stone and the two sweepers would have been hidden behind the two "Skips," and the whole point of this decisive *coup* lost.

Even when we are not working on the level, it is often most valuable to place the camera high. This position opens out and extends a scene and adds to its interest incredibly. In fact, it corrects the tendency of the ordinary lens to see a quite respectable hill as almost flat ground.



SKI-ERS HOMEWARD BOUND

WILL CADBY



THE NEW SKI-JUMP AT MURREN
WILL CADBY





THE SUMMIT OF THE CHAMOISSAIRE

WILL CADBY

And so we must exaggerate the view somewhat, just as we found it necessary to over-emphasize expressions and attitudes in photographs of snow-sports. It was only being able to photograph from a neighboring high rock, that made it possible to suggest the steep hill in "A Good Run." Had the photograph been taken at the same level as the tobogganer, the figure must have been distorted, and the hill would have appeared level ground.

I have left little space for the consideration of exposure and development. Both subjects have been treated so exhaustively in photographic manuals and in the press, that it seems hardly possible to go far wrong. In the snow, however, the beginner is more likely to err from overexposure than underexposure, but he will quickly remedy this with a little experience, and the chances are that he will then go to the other extreme. Now, in spite of all that has been written and said to the contrary, my own ex-

perience teaches me that, treat it as we will, a greatly underexposed plate will never yield a satisfactory snow-picture. Consequently it is worth while—until we have got used to the different lighting—to give the small amount of attention necessary to measure the light and get approximately the correct exposure for the subject. Modern plates are most accommodating—quite long-suffering, in fact—and they balk only when we greatly miscalculate their capabilities.

Before leaving exposure, a few words about very rapid snapshots of quickly-moving objects may not be out of place. It must be obvious to all that figures moving directly towards or away from the camera can be given far longer exposures than when they are traveling across the picture. This is the time when we need a focal-plane shutter, screwed up to its fastest, particularly if we are near the subject. Out in the open snow—at midday, however—we can



HOAR-FROST

WILL CADBY

take greater liberties with exposure than under any other conditions, as may be seen in one of my photographs of ski-jumping at Murren, where the jump can be observed in the extreme right upper corner of the picture, and the ski-jumper, who has just left it, is in mid-air in the middle of the view. In this case the shutter was set at the nominal one-thousandth of a second, and the spring screwed up to work faster than the normal pace, and the flying figure is, I believe, fairly sharp.

As to development, unless the photographer is very expert at stopping it at the exact right moment, it is, no doubt, a wise proceeding to dilute the developer considerably, not grudging the extra time taken in getting necessary den-

sity; for we must remember that snow-effects are not to be got by excessive contrasts, as even the shadows are generally light, being cast on white, with a white reflector laid all around them, and if, as is usually the case, with small negatives, we need to make bromide enlargements, we shall find that our weakly- and slowly-developed negatives yield more satisfactory prints on a big scale.

Composition

IF a man can compose at all, he can compose at once, or rather he must compose in spite of himself. And this is the reason of that silence which I have kept in most of my works



A GOOD RUN

WILL CADRY

on the subject of composition. Many critics, particularly the architects, have found fault with me for not "teaching people how to arrange masses;" for not "attributing sufficient importance to composition." Alas! I attribute far more importance to it than they do — so much importance, that I should just as soon think of sitting down to teach a man how to write a *Divina Commedia* or a *King Lear*, as how to "compose," in the true sense, a single building or a picture. The marvelous stupidity of this age of lecturers is, that they do not see that what they call "principles of composition" are mere principles of common sense in everything, as well as in pictures and buildings. A picture is to have a principal light? Yes; and so a dinner is to

have a principal dish, and an oration a principal point, and an air of music a principal note, and every man a principal object. A picture is to have harmony of relation among its parts? Yes; and so is a speech well uttered, and an action well ordered, and a company well chosen, and a ragout well mixed. Composition! As if a man were not composing every moment of his life, well or ill, and would not do it instinctively in his picture as well as elsewhere, if he could. Composition of this lower and common kind is of exactly the same importance in a picture that it is in anything else — no more. It is well that a man should say what he has to say in good order and sequence; but the main thing is to say it truly. — *John Ruskin*.



CURLING — THE CUP FINALS
 THE SKATING-RINK, MURREN
 WILL CADBY



Making Lantern-Slides at Home

ALLEN E. CHURCHILL

ONE can question the charm of the lantern-slide. Projected on the screen by means of an efficient illuminant such as the electric arc, it is unequaled as a photographic result.

No print on paper can hope to equal this method of exhibiting to a gathering of friends the results of one's adventures afield with the camera. The great enlargement of the pictures when projected on the screen, revealing a wealth of detail unnoticed in an ordinary print, the brilliant highlights, the subtle middle-tones, the deep yet transparent shadows all add to the fascination of the lantern-slide. Well colored, it may be said fairly to "hold the mirror up to nature."

For years this form of entertainment was confined largely to public lectures given by professional lecturers, and whereas many of these were both instructive and entertaining, the writer recalls also a large number of horrible nightmares of photography and color inflicted on long-suffering audiences. The field was limited because of the lack of a powerful yet convenient illuminant. Oxy-hydrogen gas and high-voltage electric arc were the only illuminating-agents that were really efficient, and it is obvious that these were beyond the reach of the amateur, as they involved the use of cumbersome and expensive gas-tanks or a special installation of electric current.

The recent immense improvement in the optical lantern, however, has made it possible for the amateur to enjoy in the home, at small cost, all the charm of the lantern-slide. By means of what is known as the "baby arc," now supplied with many types of lantern, a brilliant picture of any size up to 12 feet square may be obtained at the cost of but a few cents an hour. No special knowledge of electricity is required and ample current can be had from the ordinary house-supply. I am glad to note that the amateur appears to appreciate the fascinating possibilities of the lantern-slide, and many are rapidly converting their negatives, that would otherwise be forgotten and relegated to the shelf, into this charming form of entertainment.

This by far the most fascinating way to show one's long-neglected pictures seems to be coming into its own.

The process of making slides is neither difficult nor complicated. Any amateur who has

learned how to develop a plate and make a print from it can make them with a very little practice. They may be made by either of two methods, contact or reduction. The former way is the simpler and will, perhaps, appeal to those who use small cameras, so popular nowadays. The latter method, however, does not involve necessarily the employment of any more apparatus than can be put together by any one with average intelligence in handling tools in an evening. Any ordinary 4 x 5 or 5 x 7 camera with fairly-good extension may be used with two kits 3 1/4 x 4 to hold the lantern-plates fitted to one of the holders. The only part that requires any thought is the means to illuminate the negative evenly. Even illumination by daylight is a simple matter of tilting the negative up at the clear sky; but as most amateurs will be able to devote only their evenings to the work, artificial illumination will be necessary.

The Parallax reflector or an enlarging-lantern reversed, offers an easy solution of the problem; or, if one does not care to go to the expense of buying one of these devices, a clear field may be obtained by means of the following bit of apparatus made out of an old soap-box or a few bits of very heavy cardboard in an evening.

As few, nowadays, employ a camera larger than 5 x 7, I have given the dimensions for an illuminating-box to take negatives of any size up to this, although it can be figured out for any other size in a few minutes.

First, make a box 13" long by 9" high by 3 1/2" deep, inside measurements, and nail on a back to it, leaving the front open, for the present. Purchase of any electrician two porcelain incandescent lamp-sockets and screw them to the inside of the bottom or long side of the box, one at each end, right and left, so that their centers will be 1 1/2" from the ends of the box and 1 3/4" between the back and front. Wire these in circuit, so that two 60-watt Mazda lamps, when screwed into them, will both burn together. Cut a front for the box with a rebated opening 5 x 7, spacing this opening so that the middle of the short or 5" sides will be opposite the center of the incandescent filament of the lamps. No exact measurements for placing the front and cutting the opening can be given, as different makes of sockets vary in length, as do also lamps in length of filament.

This adjustment can be made easily to suit conditions after the lamps are screwed into the



A SUNDAY MORNING

WILL D. BRODHUN

sockets. Coat the inside of the box with white paint, attach an ordinary porcelain plug to the free end of the flexible wiring, and the box is about complete.

Two bits of spring-brass, such as are found on kits, screwed to the front will serve to hold the negative in position.

On connecting the box with the nearest lighting-fixture it will be found that we have an evenly-illuminated 5×7 opening. This and our camera now supply all the apparatus necessary for making slides from negatives of any size up to 5×7 .

Slides may be made in any tone from cold black to red-brown by varying the exposure and developer; but as a cold, clear black is on the whole the most pleasing tone, I will confine my suggestions to the making of this type of slide.

There are many developing-formulæ for the production of cold-tone slides; but I would impress upon the reader that the most important factor in obtaining a cold black is correct exposure. It must be just enough to give the delicate halftones that mark the well-made slide, but no more. With more exposure the slide will lack brilliancy and the color will tend to olive brown. Correct exposure is the secret of successful slide-making. A very few tests will make this matter clear.

An excellent developer for cold-black tones is the following:

A

Metol	50 grains
Sodium sulphite, anhydrous	1 ounce
Water	10 ounces



MEDITATION

LONDON SALON OF PHOTOGRAPHY

FRANK WOLCOTT

B

Potassium carbonate, anhydrous	150 grains
Ammonium bromide	30 grains
Potassium bromide.....	60 grains
Water.....	10 ounces

For use, mix equal parts of A and B. Another good formula is that recommended for the Imperial plate :

A

Hydroquinone	75 grains
Potassium metabisulphite.....	5 grains
Potassium bromide	25 grains
Water	10 ounces

B

Sodium sulphite, anhydrous	4 drams
Sodium hydroxide	50 grains
Water	10 ounces

For use, mix equal parts of A and B. The formula that follows I consider unsurpassed for the production of brilliant slides of cold-black tone. Its action is a trifle slow on account of the proportion of retarding-agents

used in compounding it, but it will be found to give slides of unusual quality.

A

Hydroquinone	65 grains
Sodium sulphite, anhydrous	500 grains
Citric acid	10 grains
Potassium bromide	10 grains
Water	10 ounces

B

Sodium carbonate	500 grains
Water	10 ounces

For use mix equal parts of A and B.

The slide having been properly exposed, as described above, it should be developed until the image is darker than it will be when fixed, for it loses density considerably in the fixing-bath. The image should be allowed to bury itself somewhat; but watch the highlights carefully and do not allow them to veil. These highlights do not mean necessarily a large part of the image; but wherever they occur they should remain clear white. Do not judge by the sky, as at times this may have a slight color and



LANDSCAPE

LOUIS FLECKENSTEIN

LONDON SALON OF PHOTOGRAPHY

will veil a trifle. When development is complete, rinse thoroughly and place the slide in the fixing-bath.

The composition of this bath is a matter of considerable importance if we are to consider whether or not the slides are subsequently to be colored. If they are to be colored, they should be fixed in a bath of plain hypo 4 to 1. No bath which contains alum in any form can be used. This point is often overlooked, and people complain that the colors change or bleach out after a time. As the colors in use to-day are mostly analines, they are affected by the alum under the influence of the heat of the lantern. This has been the experience of more than one prominent lecturer.

However, if the slides are to remain in black and white, the following formula will be found excellent for fixing, at the same time clearing and hardening.

Water	54 ounces
Hypo	16 ounces

When entirely dissolved, add the following made up as directed.

Water	10 ounces
Sodium sulphite, anhydrous	1 ounce
Chromic alum, powdered	1 ounce

When these two are thoroughly dissolved, add slowly while stirring 1 dram of sulphuric acid.

This fixing-bath lasts for a long time and will fix a large number of slides, but should not be used after it becomes frothy or pale in color, as it then loses its clearing- and hardening-qualities. After fixing, wash for an hour in running water.

For development, I strongly recommend the use of white porcelain trays. They aid, by comparison, in determining the clearness of the highlights, a point which I would again impress as very important in successful slide-making — second only to correct exposure.

Before concluding my suggestions on the making of slides, I want to offer a word of caution in regard to a method employed by some slide-makers. It consists in allowing the image to bury itself completely in the developer, even to the highlights, allowing these to veil. After fixation, the slide is cleared and the purity of



NUDE IN NET
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CHRISTMAS NIGHT

Copyright, 1912, James Lewis

JAMES LEWIS

the highlights obtained by the use of Farmer's reducer. Although slides produced in this manner have a decided sparkle in the hand, their appearance on the screen is not satisfactory, as the action of the reducer eats away a part of the halftones that add so much to the quality of a slide.

As the matting and binding of slides is largely mechanical, these steps need hardly be described in detail. The suggestions I have offered, with a little practice, should enable the amateur to turn his negatives into an endless source of interest and entertainment to himself and his friends.

The influence and charm of color is always compelling, and the after-coloring of lantern-slides adds wonderfully to their attractiveness and interest. Considerable space could be devoted to this fascinating work; but I must not monopolize the entire number of this magazine, so of this, perhaps, more later.

Sepia Lantern-Slides

FOR obtaining rich sepia tones, the plates should receive four to five times the normal exposure, and the following developer be used:

A

Pyro	1 ounce
Sodium sulphite	4 ounces
Water	1 pint

B

Ammonium carbonate	480 grains
Potassium hydrate	360 grains
Ammonium bromide	240 grains
Water	10 ounces

The developer is made up in the proportion of 1 dram each of A and B and 2 ounces of water, development occupying about five minutes. — *The Amateur Photographer*.

Copying Up to Date

E. J. WALL, F.R.P.S.

IT frequently happens that one is called upon to copy a picture, an engraving, etc., and a few suggestions regarding the best method of procedure may not be unwelcome.

The first point we have to deal with is, of course, the scale of reduction or, in other words, the size of the finished print; and it is just as well, therefore, to do a little arithmetic first. I naturally assume that everyone knows the equivalent focus of his lens—then the simple rule is to divide the longer dimension of the subject by the longer dimension of the desired print and to add 1 to the result and multiply by the equivalent focus of the lens; this yields the distance from the lens to the subject, and dividing this by the first quotient gives the extension of the camera. For instance, suppose one wants to reduce an 18 x 30 picture on to a 6½ x 8½ plate and we allow ½ inch for the rebate, the focus of the lens being 8 inches.

Then $30 \div 8 = 3.75$; $(3.75 + 1) \times 8 = 38$ inches, the distance between lens and picture, and $38 \div 3.75 = 10.13$ inches, which is the extension of the camera.

This simple sum gives one the approximate distances, and one can then obtain a sharp focus on the ground-glass with an eye-piece.

Occasionally it may happen that to copy a small subject, such as a diagram, the extension of the camera is insufficient, because in this case there must be double the equivalent focus between subject and lens, and lens and plate. Then the portrait-attachments for copying, which can be obtained from most dealers, are very handy; but any short-focus lens, even the ordinary hand reading-glass or magnifier, may be placed in front of the camera lens, and this will shorten up the focus of the latter.

I have a series of round spectacle-lenses of 3- to 24-inch focus, which I use in this way. Really, one ought to make a somewhat elaborate calculation of the new foci of the compound lens, but unless one has an optical bench, it is no easy matter; therefore, a practical way is to point the camera to the sky, focus the clouds sharply, measure the extension of the camera and rack out to double the distance.

As regards the lens-aperture, there is only one rule to observe—to use the largest aperture that will give sharpness all over the plate, and not to overlook the fact that the marked aperture of the stop is not the working-aperture in consequence of the lengthening of the focus due to working at close quarters.

In the copying of pictures, particularly those with highly-varnished surfaces, or that are glazed and from which the glass may not be removed, one is likely to be troubled by reflections. Even these may be overcome if one remembers one of the first laws of elementary optics, namely, that the angle of reflection is equal to the angle of incidence. It is necessary then only to draw a diagram, roughly to scale, of the positions of the picture and the lens and connect them by dotted lines to find out at once the permissible angles of illumination.



THE FIGHTING TÊMÉRAIRE

A PAINTING BY TURNER

Fig. 1 is a diagram of my class-room, in which we have done considerable copying of all kinds, and it shows the position of the easel or picture, the camera and the lighting adopted. The dotted lines show the incident and reflected rays, and it will be seen at once that none of the latter can reach the lens. This room happens to be a particularly easy one in which to control the lighting, but when one has to copy a picture in an ordinary room with only one or two windows, it is much more difficult. However, if the above-mentioned simple law be kept in mind, a position will readily be found from which the picture cannot reflect the light into the lens. Often this will be found to be about three feet from one edge of the window, provided that it is not a wide one. If it is, then that half nearest the window may require to be blocked out temporarily with opaque paper or a cloth. This will always give uneven lighting;

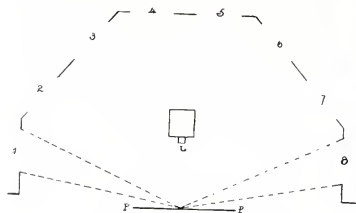


FIG. 1
All windows blocked out except 1 and 8

but this may be overcome by using a small mirror on that side of the picture away from the window.

Personally, in all difficult cases, I should adopt the use of magnesium ribbon, as with this one can control absolutely and obtain results as good as by daylight.

It is a good rule to sit down with the focusing-cloth over one's head and examine the ground-glass inch by inch with a focusing eyepiece to see whether any reflection can be seen, because there may be just one small patch of pigment which catches the light at a particular angle and reflects it into the camera. If so, the lighting must be altered to prevent this; for a direct reflection destroys absolutely all color-rendering. Modern pictures are not plane surfaces.

It is frequently recommended to light the picture from the same angle as the painter has lighted it; but this is absurd, for the painter gets his effects by color and not light and shade

in monochrome. The absurdity of following out this recommendation will be seen at once, when one takes such a picture as "The Fighting Téméraire," by Turner, in which the whole of the lighting comes virtually from the setting sun, right in the background. Exactly how to light this from the same direction as the artist did, would be wholly beyond me and the average worker, I think.

It is quite possible that some workers may not be sufficiently familiar with the above-mentioned picture for them to grasp the point that I want to drive home, so I have chosen "Norham Castle," a print in the famous "Liber Studiorum." This is, of course, in black and white; but imagine it in colors, how would it be possible to light it as Turner did, that is with the source of light dead in the center of the picture and right in the distance, and obtain a photograph? One must not forget that we



NORHAM CASTLE

are dealing with a canvas painted on its front surface and not with a transparency.

Often what is known as the "technique" — that is the brush-marks — is of considerable interest to a painter, and then the lighting may be adjusted to show these by making one side-light stronger than the other. The average person, however, does not care about them and they should be obliterated as much as possible. Sometimes, when the paint is put on with a palette-knife, this becomes decidedly difficult and then a supplementary lighting with magnesium-ribbon is often useful.

The longer the focus of the lens the better, as there is considerably less chance for the reflections to show. In any case, when copying glazed pictures, it is as well to hang a black cloth in front of the camera with a hole for the lens to peep through and thus avoid an indistinct image of bright parts of the camera.

Some writers advise treating the surface of the picture with soap and water, vaseline, oil,



"OVER THE TRACKLESS WASTE"

LONDON SALON OF PHOTOGRAPHY

JOHN CHINLETT



THE EDGE OF THE CLEARING

RUDOLF EICKEMEYER

glycerine, etc. Personally, I think this absolutely unjustifiable, few know what irreparable damage may thus be done to a picture. The most that one ought to do is to rub the surface of an oil-painting with a damp cloth to remove actual dust. In the case of pastel, charcoal and watercolor-drawings, of course, absolutely nothing must be allowed to touch the surface of the picture; on the other hand, they rarely require treatment because they do not give regular reflection.

For copying pictures the only plate to use is a panchromatic with the No. 3 Filter-Yellow screen, given on page 290 of PHOTO-ERA for December. No orthochromatic plate can give correct rendering because of its lack of red sensitiveness and the great prominence of red in very many paintings.

Sometimes one has to copy an old line-engraving, the paper of which has yellowed; then a slow isochromatic is the one to use. This will almost invariably reproduce the yellow tinge of the paper as white. If the engraving shows any "foxy" marks — those rusty-looking spots too often met with — then a light yellow screen will improve matters. Otherwise, if the paper is white, a process, contrast or very slow photo-mechanical plate is the best. Give as correct an exposure as possible and develop as long as the lines of the engraving appear free of any fogging. In this work — and it also applies, of course, to the copying of black and white type-matter — the developer plays no unimportant part, hydroquinone being a favorite with most specialists in this work and one of the best of formulae in my experience is the following :



AMONG THE CLOUDS

L. M. A. ROY

A			
Hydroquinone	16 g.	160 grs.	
Sodium sulphite, anhydrous	50 g.	1 oz.	
Citric acid	6 g.	60 grs.	
Potassium bromide	4 g.	40 grs.	
Distilled water to	1000 c.c.s.	20 fluid ozs.	

B			
Caustic soda	16 g.	160 grs.	
Distilled water to	1000 c.c.s.	20 fluid ozs.	

For use, mix 1 part A, 1 part B, 2 parts water. Temperature 65 degrees F. Continue development till the lines or letters show the slightest sign of graying over, then wash rapidly and fix in an acid-fixing bath — this is the secret of successful work.

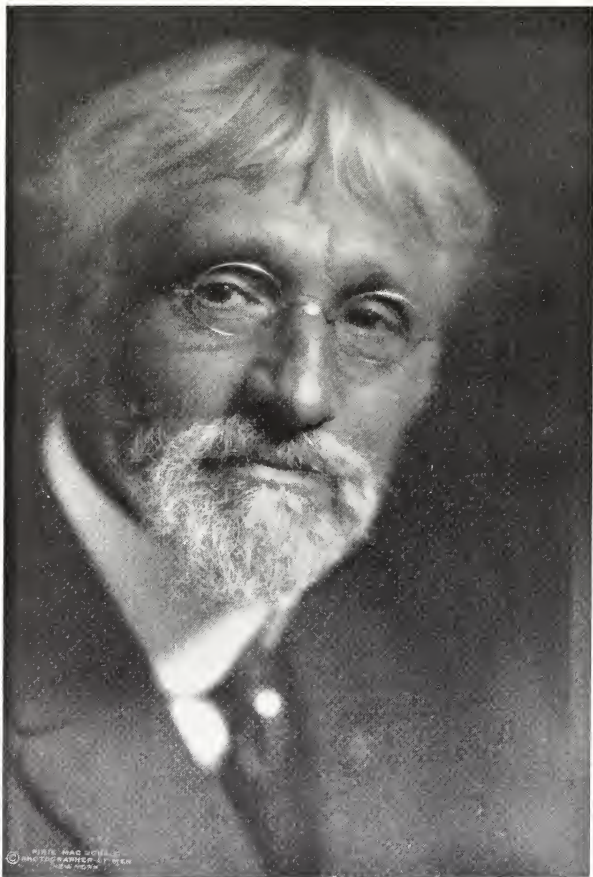
The result should be a hard clean negative with absolute bare glass in the lines and dense

highlights — if not, then one can intensify with any good mercury intensifier, although I prefer Monekhoven's for this work, as it has a tendency to clean up the line. Some workers use a uranium intensifier: this is also useful, but there is more danger of blocking up the lines.

For the print, the only paper to use is, of course, one of the hard or contrast papers and with the following developer:

Hydroquinone	4 g.	20 grs.
Sodium sulphite, anhydrous	10 g.	50 grs.
Sodium carbonate	20 g.	150 grs.
Potassium bromide	0.6 g.	8 grs.
Distilled water to	1000 c.c.s.	10 fluid ozs.

Temperature 65 degrees F. This will give a very hard black and white result.



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LEONARD OCHTMAN
BY PIRIE MACDONALD
ROYAL PHOTOGRAPHIC SOCIETY





FRIENDS

JOSEPH M. ROGERS

Within the last few weeks I was asked to copy a lot of halftone-illustrations from a book, and make lantern-slides of the same, and I was shown a lot of slides made from the same class of subject, all copies of antique casts in which the dots of the halftone-screen were painfully apparent. I determined, therefore, to see whether I could obtain a series of negatives without the dot-formation and, after one test-exposure, I made twenty-seven good negatives in about five hours, focusing each picture, exposing, developing and fixing. I naturally had assistance of a student to fill the plate-holders, or I could not have done it so quickly.

My test-exposure was to test the correctness of my theoretical reasoning, which was as follows: In reproducing a black and white subject — and that is all that a halftone-illustra-

tion is — we use a very slow, hard-working plate and strive to keep the blacks clear glass. Now, to destroy this effect all that I need do is to use a very fast plate and avoid harshness in the negatives. I, therefore, used the fastest ordinary plate I could get, my ordinary negative-developer full strength, but with the addition of a small amount of bromide, and obtained excellent results. It cost me twenty-eight plates to obtain twenty-seven negatives which are absolutely free of any dot-formation. To make the lantern-slides, I had to use a hard-working emulsion to obtain anything like reasonable results, as the original subjects are all white marbles against a black background, and I used the new Velox transparency-films. (I object, on principle, to the mention of particular makes of any photographic apparatus or material in

articles, as the motive may be construed into a free advertisement; but so far as I am aware these films are the only chloride-emulsion films on the American market for lantern-work, and I sincerely hope that some plate-maker will put a gaslight lantern-plate on the market soon. The films are excellent, but I prefer plates for lantern-slide making.)

On testing out the slides by actual projection, I was glad to find that the results on the screen, although grainy—which by the non-technical observer would be put down to the antiquity of the marble—were really very satisfactory and in no case could I detect the dots.

Sometimes it may be necessary to reproduce pencil-sketches or writing, and one always, or nearly always, finds that this is very gray, not a black, and it is difficult to make a satisfactory negative of. One very simple little dodge—stunt, you call it here—gets over the whole difficulty. Place in contact with the writing a sheet of fine ground-glass—matt surface in contact, of course. Any one who has not tried this will be astonished how black the writing will appear when thus treated, using, of course, the slow plate and developer as if it were merely an ordinary black and white line-subject.

Typewriting is a subject which one imagines ought frequently to be met with in ordinary photographic practice. Now the question of color comes in here, as so much violet and blue ink is used, and this is not easy to photograph unless you know how. The rule is, of course, use a color-filter that will make the color appear black to the plate, never mind the eye, although this is not a bad rough guide. Dr. Mees was the first, I believe, to publish any specimens of such work, and I am merely following him in showing a print of blue typewriting ink with

red ink-corrections, with and without a color-filter. This speaks for itself.

Fig. 2 was photographed with an ordinary plate; Fig. 3 with a panchromatic plate and a green screen which makes both the blue and red inks look black; Fig. 4 with a panchromatic plate and a red screen that makes the red ink invisible.

Copying is work which can be done readily at night, and if the same main principles are borne in mind, one can use magnesium-ribbon or merely an oil-lamp or any other artificial light,

giving half the exposure with the light-source on one side, then capping the lens, and placing it in exactly the same relative position on the other side, and the results cannot be told from daylight-work. When using anything but magnesium, however, it is as well to abandon the use of ordinary plates altogether and use nothing but isochromatic, for all artificial light-sources are relatively yellow and by the use of these plates the exposure is cut down considerably. Some of the slow isochromatic plates are excellent for black and white work and give as much contrast as the non-sensitized photomechanical plate, and at a pinch I have often used them by daylight.

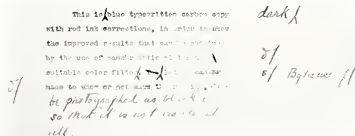


FIG. 2. ORDINARY PLATE

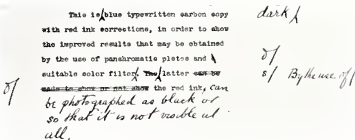


FIG. 3. PANCHRO PLATE WITH GREEN SCREEN

This is blue typewritten carbon copy with red ink corrections, in order to show the improved results that may be obtained by the use of panchromatic plates and a suitable color filter. The latter can be used to show or not show the red ink, as be photographed as black or so that it is not visible at all.

FIG. 4. PANCHRO PLATE WITH RED SCREEN

When copying on a small plate in a big camera, see that there is no bright object included in the field of the lens, or you may get diffused light that produces a slight fog on the plate. We always make a practice to surround the picture with a black background so that no light is reflected into the lens except that which comes from the object to be copied, and we even temporarily mask down large surfaces of white paper when copying diagrams, etc., and we always use backed plates for the negative and backed plates for the slide; the improvement due to the backing is very marked.

The Amateur and the Photo-Supply Salesman

A. H. BEARDSLEY

A CLOSE study of the amateur photographic business discloses some facts which are intimately related to both salesman and purchaser. The more we regard business as a mutual means to attain our desires, both financially and otherwise, the more we shall give and take and the more we shall be "on the square." Just knowing enough to "get by" is but a poor augury for success of any kind. If it is necessary for our photographic dealers and salesmen to *know* their business, it is also necessary for the amateur to know something about his sphere of activity. We then obtain satisfaction on both sides.

To take up in detail all the various ramifications through which the average amateur attains

his results would require more space than this article is entitled to, but a little sign-post, here and there, may be of assistance. First of all comes the importance to know the whereabouts of the instruction-book which came with the camera at the time of purchase. Usually it receives a cursory reading and is then thrown aside. An instruction-book to the amateur photographer is what an arithmetic is to a school-boy. It should be kept for ready reference and never thrown aside as useless. The men who wrote the book did so with the novice foremost in mind, and no salesman can state directions any more clearly or concisely than does the little instruction-book. Hence do not discard one of the most important rungs in the photographic ladder. You may understand the manipulation of your camera as well as does the salesman who is showing it to you, but what are you going to do when the salesman is far away and you are in the woods or at the seashore? Know where your instruction-book is at all events.

To-day roll-films and plates exist in a greater variety than ever before, and, perhaps, there is no greater source of annoyance to customer and salesman alike than a misunderstanding concerning this important item of photographic equipment. Either know what you want, or be in a position to give the salesman a clear idea of what you intend to do in order that he may advise you intelligently. How many pictures have been lost through the haphazard purchase of wrong films or plates, no one knows. A well-known source of trouble might be mentioned, namely, the film for the No. 3 Brownie and the No. 3 F. P. K. Here are two films taking $3\frac{1}{4} \times 4\frac{1}{4}$ pictures, yet their spools are not interchangeable as many an amateur has learned to his cost. Another source of annoyance is the two 4×5 films — one for a No. 4 Bull's-Eye and the other for a No. 4 F. P. K., yet both take the same size of picture. Other cases might be cited; but those mentioned should tend to open the amateur's eyes to some troubles which may be avoided. Sometimes a customer bases his request for a film or a plate upon the color of the box in which his last purchase was packed. To-day this avails him little, as the colors on photographic supply-boxes are as varied as those of a kaleidoscope. Perhaps it means the lowering of your pride to carry an empty spool about, in order to obtain the correct film; but far better this than annoyance



FOUNTAIN, PUBLIC GARDEN

CHAS. H. FLOOD



THE SHADOW ON THE WALL

MAUDE JAY WILSON

and, perhaps, bitter disappointment. Try to avoid the necessity to refer to various sizes of pictures in order to determine the size of your camera. On account of the reasons outlined above—that films of the same size are not always interchangeable—this habit should be overcome.

The average amateur does not grasp the real significance of shutter-speed and diaphragm-values. A snapshot at stop $F/32$ and at a speed of $1/100$ second does not appear ludicrous to him. He simply has given the matter no serious thought. Right here we have one of the most common causes of photographic failure among a certain class of amateurs. They reason that picture-taking is no serious matter; why then bother with details? Just press the button and the camera does the rest; but does it? The

writer could mention many cases in his experience to prove his assertion that six out of ten novices do not get their money's worth out of their high-grade outfits. They feel that after an expense of fifty or a hundred dollars for a camera they ought not to be obliged to give their picture-taking much thought beyond pressing the button. When the writer has taken the pains to explain that the greater the amount paid for a camera the greater must be the owner's attention to its manipulation, the customer in question has evinced a manner suited to one who had been defrauded. The average amateur would not trust himself very far in a new automobile unless he were acquainted with its mechanism; neither should he go afield with a new camera hoping to get results from an instrument with which he is totally unacquainted.



BUDDING VANITY

W. ROWE LEWIS

Therefore, in language like that of the Scripture, "Know thy camera!" This is the only secret of photographic success. What matter developers, papers and chemicals, if the plates or films are badly exposed? To know your camera is to understand the value of correct exposure. Consider, if you will, that your camera is a sort of faucet which controls the amount and quality of light admitted to a restricted area sensitive to light-action. Too much light is as harmful as too little. Turn your faucet—camera-adjustments—so that it will allow the proper amount of light to flash upon your plate; you then get a correct exposure. This may appear too elementary, but the writer knows that not enough real thought is ever given to the relation which exists between lens, shutter and plate. The amateur may think all this to be unnecessary, but he should remember the fact that those who do make it their business to understand, even in a superficial way, are the ones who show their pictures to admiring friends on a winter's evening.

Many an amateur photographer would enjoy increasing pleasure and success if he would but pocket his pride and get down to facts. By this is meant a diagnosis of his faults by a competent, agreeable, photographic salesman. Be free to admit that you took a picture late in the afternoon at a high speed and with a small stop. Admit that you fail to understand the blank negatives you hold in your hand. Moreover, tell the salesman that you supposed that as long as the sun shone brightly you could take pictures. Dismiss the thought of his smiling at you or of his assuming a lofty air of superiority. Ask him questions as you would ask your way in a strange city and there will be small doubt of a satisfactory, helpful answer. There should be more of a "get-together" spirit in photographic business-relations. Let any amateur approach any photographic salesman worthy of the name in a spirit of real interested inquiry and the result will speak for itself. Let us make photography even more a record of home-ties, of friendships and of travel.

EDITORIAL

Individuality vs. Technique

ONCE more we are persuaded to consider the question of the amateur and professional portraiture, as this is one which arises with increasing frequency. If the amateur thinks that he is justified to enter the exacting domain of professional portraiture merely because he has produced a number of artistic landscapes or marines, he shows a small measure of business sagacity, unless his means permit him to engage in this daring experiment.

We have always contended — and it is admitted by unprejudiced master-photographers — that the work of a professional portraitist who enters the field without any preparatory instruction frequently shows a freshness and spontaneity of expression which compensates for unskilled technique. If, however, such a practitioner ignores his technical shortcomings or regards them as unworthy of correction, he makes a serious mistake; for sooner or later his patrons will tire of his individuality of expression — the one redeeming feature of his obviously immature work — and, what may affect his personal pride, he will acquire no high professional standing. Eventually he may be forced to quit a field of activity which, perhaps, he never should have entered.

On the other hand, it is asserted that the shortest road to a professional career is a course of systematic training under a competent master. This being granted, what becomes of the element of originality in thought and feeling possessed by the pupil? Are these natural gifts not likely to be lost in the process of preparation under an instructor of a stronger and, perhaps, a superior individuality? If so, then the student is likely to emerge after his period of tuition with no more advantages than a routine graduate. His technical equipment — though sound, complete and adequate — will have been founded upon lines that are conventional and commonplace; but his native gifts, such as artistic instinct, imagination, breadth of vision and enthusiasm, may have lain dormant during these several years of study and preparation, and are sure to assert themselves if once aroused. They will certainly enjoy a saner application to a well-grounded executive ability when controlled by a superior intelligence; and such crudities as abnormal foreshortening, awk-

ward arrangement of limbs, hands and misdirected eyes, incongruous backgrounds and accessories, misplaced accents and promiscuous light-effects will be avoided.

The study of examples of good art, the perusal of standard works on composition and the association with superior minds will assist greatly the development of a sound individuality. Nevertheless, there are numerous instances of the reversal of this process of education, the chief difficulty of which is the eradication of technical faults, and faults of the kind which have been here pointed out, can only prove an obstacle to healthy progress; but the ease with which this may be effected is in proportion to the intelligence of the practitioner and the length of time that these errors have been practised.

The Camera in Athletic Sports

MANIFOLD, indeed, are the applications of photography to the arts, crafts and sciences, and, as an aid to the development of the skilful tactics and stratagems employed at secret practice on the athletic fields of our American colleges, it has proved invaluable. When the newest plays and tricks, designed to give an ambitious football eleven certain superiority over its competitors, are being tested for the first time, the coach's assistant, provided with a folding camera having a direct-vision finder, will take an advantageous position and at the right moment take a picture. The resultant photograph, showing the play as it actually took place, is then studied carefully by the instructor, who will point out to his pupils any existing fault in the execution of the movement or in the position, and in this manner attain his object with speed and satisfaction. Moreover, these photographs, naturally guarded with secrecy by the board of strategy, will serve as valuable records for future reference.

In this connection it is interesting to contemplate the immense number of pictures of critical plays on the diamond, made by press-photographers, which are choking the files of the reference-departments of the daily press. One sometimes wonders if their value is appreciated adequately by the various baseball-managers, who doubtless are eager to improve the ability of the players under their charge.

PHOTO-ERA MONTHLY COMPETITION

For Advanced Photographers

Closing the last day of every month. Address all prints to PHOTO-ERA, Monthly Competition, 383 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. If preferred, the winner of a first prize may have a solid silver cup, of original and artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request. Enclose return-postage in this letter.

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of *stiff* corrugated board, not the flexible kind, or with thin wood-vener. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value. Persons interested to have one of these PHOTO-ERA prize collections shown in their home-city will please communicate with the Editor of PHOTO-ERA.

Awards—Rainy Days

First Prize: George Steele Seymour.

Second Prize: Albert F. Snyder.

Third Prize: John W. Gillies.

Honorable Mention: Marlin N. Baker, R. A. Dowd, Karl Fichtner, E. Keaough, Martin Vos, D. M. Wogaman.

Special commendation is due the following workers for meritorious prints: Miles J. Breuer, F. E. Bronson, R. A. Buchanan, W. Sanford Fnlh, F. W. Hill, Dr. M. Houston, H. W. Larkin, M. F. Lawton, George C. Poundstone, Herbert S. Racine, Jr., Alice Willis.

Subjects for Competition

December—"Home-Scenes." Closes January 31.

January—"Still Life." Closes February 28.

February—"Foreign Travel." Closes March 31.

March—"Flashlights." Closes April 30.

April—"Growing Flowers." Closes May 31.

May—"Telephoto-Work." Closes June 30.

June—"Landscapes." Closes July 31.

July—"Outdoor-Portraits." Closes August 31.

August—"Water-scapes." Closes September 30.

September—"Indoor-Portraits." Closes October 31.

October—"Decorative Applications." Closes November 30.

November—"My Home." Closes December 31.

December—"Winter-Scenes." Closes January 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the publisher will give them the choice of photographic supplies to the full amount of the prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Pass the Word Along

Just as you have consciously or unconsciously been benefited by participation in these competitions, so your friends would also be spurred on to do better work. May we count on you to "pass the word along"?

THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and all regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston.

Foreign Travel—February Competition Closes March 31, 1914

WORDS to conjure with, are they not—foreign travel?

To those interested in this contest surely they bring up countless memories full of the glamour and charm of

"The grandeur that was Greece,
And the glory that was Rome."

It argues no lack of loyalty to America and things American that these older countries have such fascination for us.

If it is grandeur and beauty of natural scenery that one seeks, then one need not cross the ocean to find it, and in the cliff-dwellings and ancient remains of former civilizations, or barbarisms, of Arizona and the West the archeologist or ethnologist will find abundant interest; but all this is so unrelated to our present everyday life, compared with the historical and literary interest of the Old World Shrines.

Back of a hundred years or so, English history is our history; their men of genius are ours as much as theirs. So, in a sense, the great men of all the ages and of all climes are our heritage to-day, and nothing can so make them live again for us as standing on the ground their feet have pressed, and looking with our own eyes upon the very scenes their eyes have looked upon. Nothing can so make real and vital for us the great events of history as visiting the places where these events took place, and the man with a camera has a double pleasure of bringing home in concrete form his own impressions of these scenes and places.

When you stand on Princes Street in Edinburgh, near the beautiful monument to the immortal "Sir Walter," and look across at the "Old Town," where stands

"Piled deep and massy,
Close and high,
Mine ain romantic town,"

what a satisfaction it is to be able to bring home to your friends not a postcard of the view as some one else saw it, but your own picture, taken in just the condition of mist or sun in which it revealed itself to you.

That little glimpse of Derwent water from Friar's Crag—what memories it calls up! No other coves wading any other shallows could mean the same to you, however beautiful they might be; and as for this little glimpse of the chalk-cliffs at Dover, no brilliantly-colored card could ever bring back so vividly the blue of sky and sea, the clear emerald of the grass lapping down over the white cliffs and the red chocolate sails of the fishing-boat!

Was ever Dutch maiden on a poster so bewitching as this little damsel who looms above you on the dike, her

wooden shoes looking almost as large as the distant windmill!

Of course, there will be many times when you could tear your hair and weep salt tears over things that must be passed by, because of coaches that will not stop, because of rain that *will* fall, or because of this, that or the other circumstance not to be overruled by any mere photographer.

Also things must often be taken from the possible view-point rather than from the chosen one, but don't be afraid to use films; they can be obtained nearly everywhere and sometimes a very unpromising exposure will give a surprisingly satisfactory negative. Particularly in Italy, the Land of the Sun, when snapshots even after sunset will give good results and on seemingly quite dark days printable negatives may be obtained with an exposure of $\frac{1}{25}$ second.

It is a question whether it is better to develop one's films as one goes along, or save them to be done at home. If kept sealed in the little tin tubes furnished by the manufacturers, they will, almost without exception, stand keeping for months, and the advantages of developing in one's own darkroom and at leisure are many.

However, if one is to be in one place for some time, there are advantages in knowing what results one is obtaining, and it is wise either to do them oneself or to have them done at some reliable place.

For entrants in this year's contest, however, the question must be how best to present material already obtained.

It is hardly probable that many of you have been so fortunate as to make a long enough stop abroad to warrant the carrying of a tripod-camera of any size. The vast majority have to start with the small film-negative, and, of course, some form of enlargement is almost necessary.

Bromide enlarging is the simplest and least expensive method, and, to me, the least satisfactory.

The enlarged negative is infinitely better suited to the production of artistic results and is not difficult.

A great advantage of this method is that excellent results can be obtained from very weak and flat negatives.

A certain view of Florence from San Miniato was taken very late in the day and the sky, heavily clouded, came out splendidly, but the city was very dim and indistinct. A slow lantern-slide plate was used to make a contact transparency. This showed greatly increased contrast, and when a similar slow-speed plate was used for the enlarged negative, the result was a plate that gives a very pleasing print on platinum, reproducing the view as seen in all details.

The point of being able to make prints in any medium is a strong one in favor of the enlarged negative. A platinum or a carbon print will probably come much

nearer reaching your ideal of the correct portrayal of your chosen scene than the bromide enlargement could ever come. The most difficult question of all to solve may be the choice of the best films from which to make enlargements.

One thing to avoid is the hackneyed. Certain views of some buildings are taken by every one who goes to Europe with a camera and, unless you feel sure that your film has some particular and unusual claim to excellence beyond its fellows, choose some less universally photographed subject, or one of which you have been so fortunate, or original, as to secure a novel viewpoint or on which you have obtained an unusual light-effect.

Never mind if your subject is an old one; all the better, if you have found something new to say upon it. You will avoid much competition, however, if you choose some less photographed thatched cottage than "Anne Hathaway's"; and there are so many that, lacking only the

lens. Nello and Petrasche have many a representative on the streets of Antwerp to-day, and, had they lived in present-day Flanders, I am sure that Nello would have had no trouble to procure the necessary fee to assure him the sight of his adored paintings. All he would need do would be to pose before the cameras of the throng of tourists whose "Monnaie" is always demanded.

Perhaps you have something unique of the long-horned, creamy oxen of the Italian campagna, or of the peasant-women of France working in the fields and looking as if they had just stepped out of some canvas of Millet or Jules Breton.

Perhaps it will be a Swiss goat-herd with his charge — didn't you wish you could photograph the musical bells! — or the sturdy, old fish-wife striding along like a boy with her long-pointed basket on her back.

Wherever your choice shall fall, let your medium be such as shall bring out to the best advantage the par-



KAPPELL-BRÜCKE, LUCERNE

KATHERINE BINGHAM

association with the all-hallowing name of Shakespeare, are just as picturesque as that of Shuttery. Neither would The Auld Brig o' Doon have stood out so preëminently from others of its ilk, had not "Bobbie Burns" chosen it as the scene of the culmination of Tam o' Shanter's wild ride. The banks and braes o' bonnie Doon are joined by other stone arches less encumbered by monuments and tea gardens for accessories.

But buildings and places of renown are not the only or the chief photographic material that confronts one on one's travels.

The street-scenes, farm-life and the quaint costumes and customs of the peoples through which one's journey lies are more than all else fascinating subjects to photograph, and furnish abundant scope for all the originality and ingenuity of which one may be possessed.

You will find many dogs of Flanders, and they with their masters are only too ready to get in front of your

particular charm of that particular scene. If it be some quiet scene in evening-light, do not try to make it too brilliant, but let it be soft in detail and rather low in tone. If, on the contrary, it should be some detail of architecture, then give it the sharpness of definition needed to bring out the beauty of carving or mosaic wherein the charm of the building may lie.

Think out, before you begin its evolution, just what effect you wish to produce on the beholder by this particular print; then use all your skill in manipulation to make all things work together to that one end, and be sure that your results will justify your efforts.

The subjects for this competition may be taken in any foreign country, not necessarily of Europe. In the broad meaning of the term, "Foreign Travel," even views and scenes typical of Canada, Mexico, Cuba, Hawaii and the Philippines are eligible, but they must be entirely the product of the entrants to this contest. Copies



A RAINY DAY IN ORLEANS ALLEY

GEORGE STEELE SEYMOUR

of prints, or prints from negatives, made by other persons are not admissible.

Since the announcement of this contest — our November, 1913, issue — several interested workers are now touring in foreign lands and, doubtless, will enter attractive subjects. If they, or others about to go abroad with cameras, choose to send prints to this competition while *en route*, they may do so, provided that the pictures reach PHOTO-ERA office before April 1, 1914. Of course, workers who have produced negatives of foreign interest before this contest was announced, are equally welcome to enter prints, only that subjects never before published should be selected for this purpose. As usual

with PHOTO-ERA competitions, the jury will favor prints in which the artistic element predominates.

In closing I cannot refrain from commending to inexperienced tourists with the camera the very excellent article, "American School-Boys' Tour in Europe," by James R. Starr, which appeared in January PHOTO-ERA. Mr. Starr worked on the very lines which I have suggested, and in his lucidly-written story conveys information that is eminently practical and trustworthy.

If you have unexpectedly done well, attribute your success to the effect of previous study. — *Alfred Stevens.*



THE SHOWER

ALBERT F. SNYDER

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.

G. A. R.—To make “tintypes” (we presume that you mean “ferrotypes,” as such a thing as “tintype” never was made and does not exist), read *The Ferrotype's Guide*, by Estabrooke.

Ferrotypes are positives, produced by the wet-collodion process, a black or chocolate thin, enameled iron plate being used as a support for the picture instead of glass. The picture-side of the plate is first coated with collodion, then sensitized in a silver-bath, exposed while wet, developed with iron developer, fixed in a solution of potassium cyanide and quickly dried over an alcohol flame. The reason for the erroneous and absurd designation, “tintype,” is that some people suppose the material of the picture to be tin, whereas it is merely sheet-iron shellacked.

H. S. S.—The chief advantage to be gained by using the rear element of a rectilinear lens is that its focal length is approximately double that of the combined lens, and so yields a larger image. Of course, the rectilinear quality of the combined lens is lost, but this is of prime importance only in architectural work and other subjects in which prominent straight lines must

be located near the edges of the negative. It is customary to use smaller diaphragms with the rear element alone than otherwise, F/16 being the one ordinarily employed. It should be kept in mind that exposures with the rear element alone must be approximately four times those with the combined lens and the same diaphragm. The rear element is used in preference to the front element because, in the case of a single lens, it is preferable to have the diaphragm in front of the lens.

P. D. B.—Hydrogen peroxide is ordinarily used as a hypo eliminator for plates and films, but there seems to be no reason why it cannot be used for development paper as well. One dram of hydrogen peroxide to five ounces of water is the proper strength. After rinsing the negative thoroughly in water, immerse it for two minutes in the solution, rinse again in water and dry in the usual way.

B. P. S.—Small opaque spots on negatives are caused by iron scale in the water, or by sediment in the fixing-bath. Draw wash-water through a filter and always decant off the fixing-bath, throwing away the sediment at the bottom of the bottle.

L. V. N.—Enlarging on gaslight papers is frequently practiced and possesses distinct advantages in the case of rather flat negatives. Being chloride emulsions, they have the characteristic richness and sparkle lacking in bromide papers in conjunction with other than vigorous negatives.

M. B. F.—The yellowish-brown stains you speak of on your prints are due either to improper fixing or washing, or else to exhausted or stale developer; more likely the former. Developer should not be used after it becomes discolored or muddy.



THROUGH THE MIST

JOHN W. GILLIES

B. N. L. — You are quite right. An anastigmat provided with an **extension-lens** is ideal for a great variety of work. The extra rear lens yields an image fifty per cent larger, yet with a doublet with all its corrections and a speed of F/8.

C. A. S. — Replying to your recent inquiry, the **transfer-paper for carbon-printing** is the best to use for Ozobrome. The latter is really nothing but a carbon-process, the tissue being very rich in pigment.

Regarding the **sensitizer for plain paper**, the strength should be 60 grains of silver nitrate to the ounce of water for your process. When dissolved, add

strong ammonia, drop by drop, until the black precipitate first formed is dissolved. If you prefer, you can use 30 grains of citric acid instead of ammonia. Either formula is excellent.

It is often said that **kallotype prints** are not so permanent as those by other more common processes, but this is probably due as much to carelessness of the individual worker as to anything else. We have several kallotype prints here in the office that are six or seven years old and which are in perfect condition.

The **arc-lamp** you mention can be used for exposing printing-out paper.



A PATH IN FAIRMOUNT PARK

KARL FICHTNER

Print-Criticism

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.

W. L. — Your road-scene is very effective except that the strongly-lighted bar, in the left-hand corner, ought to be at the opposite end of the picture, and for this reason the composition is not very successful, although the idea is excellent. The color of the print is not bad, but lacks clarity in the shadows and middle-tones.

J. L. W. — "Posing for the Artist," is a picture of much charm, but the head is spoiled by the large, grotesque and disfiguring hair-ribbon. The photographic quality is good, but the pose less so.

The picture, "A Country Lass," is too contrasty; besides, we doubt that the neat and stylish costume would pass for that of a genuine country-girl. As the picture is posed indoors, the country-atmosphere is lacking. Compositions of this character often show much ingenuity, but generally do not conform to truth. If your picture were a so-called "conceit or whim" — very well; but with its present title it is not consistent.

J. L. W. — The picture, "The Old Straw-Hat," is likewise unsuccessful and inconsistent, because posed indoors instead of in the open. These things may have escaped your attention, and be considered trifling; but it is well to be consistent in adapting your model to the conception, and the setting and accessories to the model.

A. F. F. — "Queen Anne's Lace" is attractive in composition and well-rendered photographically, but we believe that when photographing a potted plant the entire pot and the surface on which it stands should be included. Your pot and plant appear to be suspended in mid-air with "no visible means of support."

E. P. — The expression of singing would be more obvious if associated with a different pose, possibly if the little girl were to hold a song-book or if she were one of a group of singers. Also the picture seems to crowd the picture-space.

R. M. R. — The little girl at the right does not appear to be an artistic addition, on account of the large, white hair-ribbons, which, in the Editor's opinion, expressed for some time past, are a detriment rather than an artistic addition; for in the opinion of the Editor, than whom no one loves children more dearly, a child endowed with beautiful hair is God's own creation, and it were almost sacrilege to attempt to improve upon it. He believes, as do many others, that there are other less conspicuous and more harmonious devices to keep the hair together or to keep it out of the eyes of the little one.

H. A. T. — The natural objection to your picture is the surroundings or background, which ought to suggest outdoors rather than an interior. Also, a gray hat might not give the tendency to top-heaviness, as suggested by the very black hat, as the figure is dressed in white.

F. J. G. — Your figure gives the impression of being self-conscious, and the act of whistling might better be associated with a different pose or different surroundings, in order to make it more effective, as well as logical and consistent. The expression induced by the act of whistling is admirably rendered, although the artistic effect is not so good as the others, the left hand being too strongly lighted and the rest of the picture too obscure.



TURBULENT WATER, LAKE MICHIGAN

JAMES ALLAN

E. P. M. E. — As we do not know the object for which the prints are intended, we do not know from what standpoint they are to be criticised. We should say, however, that the subject is very pictorial, and that the fault lies with the lighting — the time of day when the exposure was made. The glossy print seems to be very satisfactory; but if you want a still more successful print, a softer medium would be preferable.

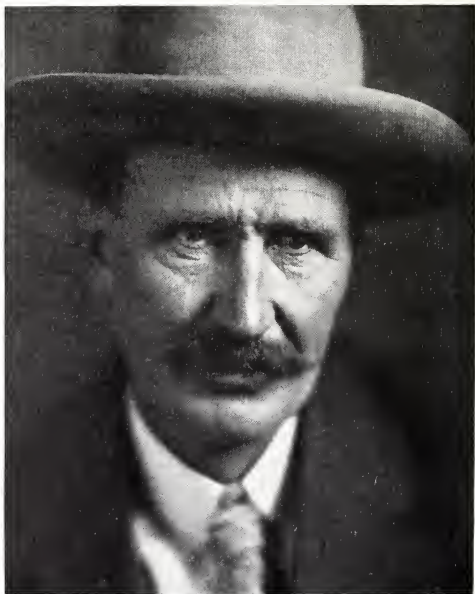
P. E. — It is possible that if you had a softer-working developer (diluted), and about ten minutes longer in the tank, the result would have been softer. An excellent soft-working developer is Seed's Eiko-Hydro formula, found in any of the older American photo-annuals. The least effective of your prints are those in velvet green, because the shadows are blocked up.

M. V. — Much depends upon the purpose for which your pictures are made. Often a picture does not conform to the canons of art, but is otherwise effective and has a strong selling-quality. Thus the "Smoker" may find a ready sale at almost any time. It is admirable except that the outlines of the arm and back are entirely obscured, and have to be imagined.

W. L. S. — "Nature's Draperies" is a pleasing subject, but you have failed to record it exactly as it appears to the eye. It is halation that makes the leaves and overhanging branches so light in tone. For such a view you need a double-coated plate, or, in the English line you are using, a backed plate. There are also signs of under-exposure and slightly-forced development.

F. I. — Your compositions are better than your technical work. These spots and blemishes, presumably in the negatives, should be avoided by careful and cleanly work. It would seem as if a developing-tank would avoid them, although we have no data-blank at hand to show that you are not already using one. It is also possible that some of the round spots, as in "Marine," are only in the print. If this is the case, use more developer and you will have less trouble.

F. E. O. — "Shadows on the Ice" is technically a very good piece of work; also the composition in the main is pleasing, particularly the sweeping water-lines. It would have been an improvement to have placed the bridge, where the interest centers, a little more to one side or the other. The black streak at the left, formed by a crack in the ice, is most unfortunate — the most disturbing thing in the picture. Perhaps it might be obliterated by skilful work with a retouching-pencil.



A MAN FROM THE WEST

J. W. HEEBNER

FIRST PRIZE — BEGINNERS' CONTEST

THE ROUND ROBIN GUILD MONTHLY COMPETITION

For Beginners Only

Closing the last day of every month. Address all prints to PHOTO-ERA, Round Robin Guild Competition, 383 Boylston Street, Boston, U. S. A.

Restrictions

ALL Guild members are eligible in these competitions provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Anyone who has received only Honorable Mention in the PHOTO-ERA Monthly Competition for advanced workers still remains eligible in the Round Robin Guild Monthly Competition for beginners; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

Prizes

First Prize: Value \$5.00; *Second Prize:* Value \$2.50; *Third Prize:* Value \$1.50; *Honorable Mention:* Those whose work is worthy will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "General;" but only original prints are desired.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. All prints submitted, except prize-winners, will be returned if postage is sent in a separate letter with the data.

Rules

1. These competitions are free and open to all members of the Round Robin Guild. Membership is free to all subscribers and regular purchasers of PHOTO-ERA sending name and address for registration.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request.

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

Awards — Beginners' Contest

First Prize: J. W. Heelner.

Second Prize: Mrs. C. B. Fletcher.

Third Prize: James Allan.

Honorable Mention: C. A. E. Long, Fred E. Onthank, H. B. Prindle.

Special commendation is due the following workers for meritorious prints: Benedict Bantly, Beatrice Booth, Ernest F. Gates, Mary E. B. Gruendike, Alfred S. Harkness, Elmer F. Van Loan, H. W. Lyman, W. J. Osborn, Edgar K. Randall, E. B. Rowe, Jack Salton, A. J. Voorhees, E. G. Wickersham.

THE world gives its admiration not to those who do what nobody else attempts, but to those who do best what multitudes do well. — *Macaulay.*



IRMA

MRS. C. B. FLETCHER

SECOND PRIZE — BEGINNERS' CONTEST

Exposure-Guide for February

Calculated to give Full Shadow-detail at Sea-level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of time in table. From 8000 to 12000 feet use $\frac{1}{2}$ of exposure in table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8 or U. S. 4. For other plates, or stops, see tables.						For other stops multiply by the number in third column		
Hour	Bright Sun	Sun Shining Through Light Clouds	Diffused Light	Dull	Very Dull	F/4	U. S. 1	× 1/4
11 A.M. to 1 P.M.	1/32	1/16	1/8	1/4	1/2	F/5.6	U. S. 2	× 1/2
10-11 A.M. and 1-2 P.M.	1/25	1/12	1/6	1/3	2/3	F/6.3	U. S. 2.4	× 5/8
9-10 A.M. and 2-3 P.M.	1/16	1/8	1/4	1/2	1*	F/7	U. S. 3	× 3/4
8 - 9 A.M. and 3-4 P.M.	1/5*	1/2*	1*	1 1/2*	3*	F/11	U. S. 8	× 2
<p>The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions under which one works. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop.</p> <p>* These figures must be increased up to five times if light is inclined to be yellow or red. Latitude 60° N. multiply by 2; 55° × 2; 52° × 1½; 30° × ¾.</p>						F/16	U. S. 16	× 4
						F/22	U. S. 32	× 8
						F/32	U. S. 64	× 16

SUBJECTS. For other subjects, multiply the exposure for average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most tele-photo subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, glades and under the trees. Wood-
48 interiors not open to sky. Average indoor-portraits in well-lighted room, light surroundings.

Example :

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an open landscape, without figures, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U.S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of "Table for Other Stops," opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply $1/16 \times 4 = 1/4$. Hence, exposure will be 1/4 second.

For other plates consult Table of Plate-Speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. $1/16 \times 1/2 = 1/32$. Hence, exposure will be 1/32 second.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

<i>Society or Title and Place</i>	<i>Date</i>	<i>Particulars of</i>
KODAK EXHIBITIONS Denver, Auditorium. Omaha, Auditorium. Wichita, Forum. Oklahoma City, Auditorium. PHOTO-ERA PRIZE-PICTURES	February 3 to 7. February 10 to 14. February 16 to 21. February 23 to 28. Feb. 20 to March 20 1914	Eastman Kodak Company, Rochester, N. Y.
TOLEDO CAMERA CLUB	Jan. 15 to Feb. 15 1914	O. R. Thompson, President, Racine Camera Club, Racine, Wis. John F. Jones, 723 Ash Street, Toledo.
TORONTO CAMERA CLUB SALON	April 27 to May 2 1914	A. G. Fraser, Secy.-Treas., Toronto Camera Club, Toronto, Canada.
WANAMAKER ANNUAL EXHIBITION	March 2 to 31 1914	John Wanamaker, Photographic Dept., Philadelphia, Pa.

Notes on the Use of Exposure-Meters

For those who wish to use a meter that is accurate in all conditions, we can recommend both the Wynne and Watkins. Both depend on the tinting of a sensitive

paper to a standard shade, thus giving the exact actinic value of the light.

For a practical and lucidly-written article on the use of exposure-meters, at all seasons of the year, see PHOTO-ERA, January, 1912.

Plate-Speeds for Exposure-Guide

Class-numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1 3, P. E. 156, Wy. 350, Wa.
Lumière Sigma (Violet Label)
Wellington 'Xtra Speedy Extreme

Class 1 2, P. E. 128, Wy. 250, Wa.
Barnet Super-Speed Ortho
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Iford Monarch
Imperial Flashlight
Seed Gilt Edge 30

Class 3 4, P. E. 120, Wy. 200, Wa.
Ansco Film, N. C. and Vidil
Barnet Red Seal
Central Special
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Iford Zenith
Imperial Special Sensitive
Seed Color-Value
Wellington 'Xtra Speedy

Class 1, P. E. 111, Wy. 180, Wa.
American
Barnet Extra Rapid
Barnet Ortho Extra Rapid
Imperial Non-Filter
Imperial Orthochrome Special
Sensitive
Kodak N. C. Film
Kodoid
Lumière Film and Blue Label

Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso Speedy

Class 1 1/4, P. E. 90, Wy. 180, Wa.
Central Comet
Cramer Banner X
Cramer Instantaneous Iso
Cramer Isonon
Cramer Spectrum
Defender Ortho
Defender Ortho, N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 26x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.
Cramer Anchor
Lumière Ortho A
Lumière Ortho B

Class 2, P. E. 78, Wy. 120, Wa.
Cramer Medium Iso
Iford Rapid Chromatic
Iford Special Rapid
Imperial Special Rapid
Lumière Panchro C

Class 3, P. E. 64, Wy. 90, Wa.
Barnet Medium
Barnet Ortho Medium
Hammer Fast
Seed 23
Wellington Landscape
Stanley Commercial
Iford Chromatic
Iford Empress
Cramer Trichromatic

Class 5, P. E. 56, Wy. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho
Wellington Ortho Process

Class 8, P. E. 39, Wy. 30, Wa.
Cramer Slow Iso
Cramer Slow Iso Non-Halation
Iford Ordinary
Cramer Contrast
Iford Half-tone
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.
Lumière Autochrome

OUR ILLUSTRATIONS

Edited by WILFRED A. FRENCH

THE front-cover decoration for February is typical of the winter-season, and a locality where winter-sports are enjoyed in all their fulness and glory. Instead of straying into the domain of sport, of which ski-ing is a prominent feature, we refer the reader to Mr. Cadby's admirable description. The Cadbys are not only accomplished photographers and correspondents, but great lovers of nature, particularly of Swiss winter-scenery, and every year this enthusiastic pair passes a month or so of mid-winter at some prominent Swiss winter-resort. This year they have chosen the region of St. Moritz-Dorf. Mr. Cadby's article in this issue is of exceptional interest, and his illustrations, one and all, cannot but prove a source of keen enjoyment to our readers. Some of these pictures merit close scrutiny, on account of interesting detail, as will be seen from the text. Let not the tiny figure of the ski-er near Murren, for example, escape notice. All the pictures are specimens of expert photography.

In this issue are presented a number of pictures from the two great London shows described by E. O. Hoppé and Frank H. Read in December PHOTO-ERA and omitted from that issue for lack of space. Incidentally, these pictures are by American workers. "Sunday Morning," page 66, shows that the artist, Will D. Brodhun, is still interested in taking subjects against the light, although he does not appear at his best. The general effect is excellent, although the technical result is obviously marred by the use of a lens of inadequate focal length. Data: January 11.30 A.M.; sun shining strong through the window; 5 x 7 Premo camera; Voigtlander and Sohn Collinear; focus, 7.7 inches; stop, F/5.6; 17 seconds; Stanley plate; Metol-Hydro, old with plenty of water and a dash of fresh added for snap. Mr. Brodhun tries to expose fully to get plenty of detail in the highlights, and then develops a little less than customary, which gives a thin-looking result for a plate, 8 x 10 Azo B print.

That the jury of admission was broadminded, and overlooked evidences of hasty or careless workmanship, may be inferred from the picture, "Meditation," page 67. Here the spirit of mental soliloquy is well represented. The novelty of the arrangement is unmistakable, but the beholder's imagination must supply the identity of the locality depicted by the background, although the sitting was evidently made indoors, of which circumstance the shadow back of the model is conclusive proof. Data: 6½ x 8½ Century Grand camera; 14-inch Smith lens; Seed 30; pyro tank; W. and C. Platinotype print, 6 x 8.

Louis Fleckenstein's pretty landscape, page 68, suggests in its general character Hobbema's well-known picture, "Avenue of Middelharnis." Taken as a whole, the performance is very pleasing, the design leaning decidedly towards the decorative. Data: 5 x 7 Pony Premo No. 6; 14-inch Smith lens; stop, F/8; February, 10 A.M.; bright sun; Rodinal; 5 x 7 print for reproduction on Azo E-XX.

One of the "Bions" of the London Salon was William Shevell Ellis' "Nude in Net," page 69. It is an exceedingly attractive study of graceful lines, whose interest culminates in the hands clasping a ball or sphere. As an exemplification of refined sentiment, this picture marks a rare achievement in the artistic activity of Philadelphia's brilliant photographer.

Although a skilfully-executed piece of work, "Christmas Night," page 70, makes a stronger appeal by reason of its well-chosen title. Data: 4 x 5 Premo camera; B. & L. R. R. lens; 6¼-inch focus; stop, F/16; December, 7.45 P.M.; moonlight, and arc-light hidden by tree; 30 minutes; Wellington Anti-Screen; Dianol; 4 x 5 Cyko Normal Plat. print toned.

How only two or three sea-gulls, placed judiciously against a background of sea and sky, can yield a picture of much significance, is shown by John Chislett's "Trackless Waste," page 73. The traveler, who has stood in the vessel's stern, watching, careless of time or weather, the patient, silent chase of the sea-gull, will gaze thoughtfully on this simple but suggestive picture.

It seems but a few years ago that Rudolf Eickemeyer, always the artist of beauty and sentiment, delighted in symphonies of direct photography. Tiring, no doubt, of his straightforward modest expression, and seeking relief through a modification of his usual media, our camerist of the Hudson essayed the field of near-impressionism, of which venture his "Three Ducks on a Pond," published as the initial illustration in this magazine a few years ago, was one of his finest achievements. Try as we may, we cannot derive as much pleasure by looking at "The Edge of the Clearing," page 74. It is not due so much to the impression that here we have two distinct pictures — one above the other — as it is to the deliberate and abnormal astigmatism and the destruction of beautiful detail for the attainment of a caprice.

Whether in the act of spying an enemy or a quarry, or merely surveying the locality, the Indian pictured by L. M. A. Roy, page 75, presents a striking and picturesque figure in a scene which appeals very strongly to the imagination. The composition is clever and original; the figure is even placed in the center, somewhat at variance with a well-known art-principle. Data: August, 11 A.M.; bright; 6½ x 8½ view-camera; Smith Semi-Achromatic; 15-inch focus; at F/11; Orthochromatic Non-Hal.; 5-times color-screen; ½ second; Rodinal; 6½ x 8½ Cyko print.

The superb portrait of Leonard Oelthman, the eminent New York painter, demonstrates the high reputation of Pirie MacDonald as a "photographer of men," as well as his ability to interpret with force and breadth the personality of his many notable sitters without deviating from his adopted mode of expression — unequivocal direct-photography. To mitigate, somewhat, the unavoidable literalness of his effect, he resorts to the occasional use of bolting-cloth, which imparts a canvas-like impression to the print; but the negative, itself, shows no trace of retouching. His chemical skill is a part of his masterly technique, and yields tonal-values that are admirable in their fidelity. Data: May, 4.30 P.M.; fair light; 8 x 10 Ansco camera; 6D Dallmeyer portrait-lens; stop, F/22; ¾ second; Cramer Crown; pyro; 6 x 9 Artura Iris print.

Those of our readers who remember "The Autocrat of the Kitchen," published in PHOTO-ERA, January, 1911, will perceive that, in "Friends," page 77, Joseph M. Rogers holds his own as a portrayer of strongly-individualized characters. This open-air genre is a solidly-constructed composition, simple and straightforward, no accessories to divert the beholder's interest, lighting deftly managed, and values admirable; yet the diffusing-

effect of the lens was allowed to run riot, evidently, however, because that was the effect intended by the artist. Those who object to the line of halation which follows around the figure have but to look at the picture at an increased distance, when it will disappear. Data: July, 2 p.m.; taken in bright sunlight; $6\frac{1}{2} \times 8\frac{1}{2}$ Korona camera, 12-inch Smith lens; at F/8; $\frac{1}{50}$ second; Seed 26x; M. Q.; $6\frac{1}{2} \times 8\frac{1}{2}$ Platinum print.

The picture of the marble group, page 79, represents one of a number of experimental fountain-figures set up not long ago, by the Boston Art Commission in the Public Garden, Boston, U.S.A. The one pictured by Charles H. Flood was very generally admired and hopes were entertained that it would remain permanently where it was set up tentatively; but when the "city-father" did not provide the funds for its purchase, the beautiful work by Conti, of New York, was taken away with the other fountain-figures. Data: morning, good light; Cramer Iso N. H.; $\frac{1}{50}$ second; Goetz Dagor lens; postcard print.

To those who are not familiar with Maude Wilson's work, we recommend the illustrated article by Sydney Allan in the December, 1911, PHOTO-ERA. She excels in the poetic rendering of the landscape, although her architectural impressions also show her fondness for atmospheric suggestion. The fragment of an old Spanish mission, page 80, is inadequate, as the print sent for reproduction was a little faded. Data: January forenoon; sunshine; No. 4 Bull's-Eye open lens; film; snap; pyro; Royal Bromide enlargement; 6×8 .

"Budding Vanity," page 81, probably appealed to the generous London jury because of its directness—freedom of affectation and preparation. These are always excellent traits in a genre-study; but we confess our weakness for evidences of discrimination—a choice of pose, graceful lines when they are possible, and pleasing masses. Data: Illumination—Tungsten lamps; Sanderson half-plate camera; Goetz Syntor; at F/6.8; 5 seconds; Barnet Super Speed Ortho; Rodinal; Barnet Bromide; Metol diluted about fifty times, excess of bromide, and very long development.

Guild Editor, Katherine Bingham's ability is very versatile. Like the well-grounded painter, she is at home in any department of her vocation. Thus she brought home from her European travels, several years ago, a goodly number of photographs in which she had pictured the object or view just as it appeared to her, yet always and characteristically artistic. The Chapel Bridge at Lucerne, page 85, should exemplify this, as well as her suggestions to participants in the "Foreign Travel" contest. See page 84. Data: Cramer Medium Iso; $\frac{1}{25}$ second; bright sun; enlarged negative; etching black platinum.

The Photo-Era Monthly Competition

In the convincingly attractive street-scene by George Steele Seymour, on page 86, we have before us a complete, well-ordered design. The vertical lines recede in pleasing fashion; the perspective is admirable, and the wetness is convincing. Data: New Orleans, January, 1912; No. 3 F. P. K.; Bausch & Lomb R. R. lens; stop, F/8; $\frac{1}{25}$ second; no sun; Eastman film; M. Q. developer; 8×12 Royal Velox enlargement.

The park-scene, depicted by Albert F. Snyder, page 87, is as interesting and unconventional as any contributed to our several "Rainy Days" contests. Here is an instance where the pictorial design contains numerous prominent objects, yet none can be spared. It is quite unusual that a monotonous, depressing rainy day offers such rich and grateful material for the camera. The viewpoint has been well chosen; all the lines converge

towards the chief point of interest—the fountain; and, while the picture contains at least two groups of objects, there is a remarkable degree of unanimity. The picture can be studied with satisfaction by the advanced worker and with profit by the beginner. Data: June 3 p.m.; 3a Kodak ($3\frac{1}{4} \times 5\frac{1}{2}$); R. R. lens; stop, U. S. 4; $\frac{1}{25}$ second during a shower; tank, pyro; Carbon Illingsworth, part of original film enlarged on paper negative.

Although the famous Flatiron Building, New York City, has figured before in these pages, its presentation by John W. Gillis, page 88, is unusually meritorious. The narrow, lofty structure is an effective foil to the branches of the principal tree which, like the limbs of an octopus, roam sinuously through the air. The well-controlled realism of the rain-covered walk and the judiciously "arranged" groups of pedestrians are worthy to be praised. Data: Spring, 1913; Voigtlander Radiar camera; Collinear Series III; $5\frac{1}{2}$ -inch focus; stop, F/6.8; Wellington Anti-Screen; M. Q. and pyro; $\frac{1}{25}$ second; Wellington Bromide, $6\frac{1}{2} \times 8\frac{1}{2}$; Duratol.

True, we have had reproduced pictures of wet, tree-mirrored walks before this, but none of precisely this character, page 89. The foreground is exceptionally engrossing and might well have served as the chief source of pictorial interest in spite of the seemingly endless walk; but the attention is diverted by patches of sky with their strongly-marked reflections, thus lighting up each corner of the picture-area. The eye is also tempted to stray expectantly into the wide, brightly illumined road off at the right. Data: April 27, 1913; 10 a.m.; poor light; B. and L. lens; F/24; 3 seconds; 4×5 Seed 27; Hydro; enlargement.

The Beginners' Competition

THE winner of the first prize this month, J. W. Heebner, possesses a high degree of natural ability and has made rapid progress in the short time that he has been a student at the Illinois College of Photography, Effingham, Ill. Twice he has won first prize in the Round Robin Guild Competition. His portrait of a western man, page 90, is solidly modeled and forms a strong psychological study. All the interest is centered in the man's eyes, which are not easy to read. Data: October, good light under simple slant skylight; Verito F/4 lens; 11-inch focus; stop, F/5.6; Seed 26x; pyro; 2 seconds; $6\frac{1}{2} \times 8\frac{1}{2}$ print on Cyko Buff Linen.

The view of surf, Lake Michigan, page 90, is a capital rendition of the subject, with the suggestion of accumulated force of the approaching rollers. The mass of turbulent water in the foreground engages our attention first, then follows the formidable roller in the middle distance, succeeded by the long line of glistening waters high on the horizon. This line of progression was fortunately captured by the camerist, James Allan, who deserves much credit for a quick, discerning eye. Data: November 9, 1913; 12 m.; Reflex camera, focal-plane shutter; Goetz Celor; 7-inch focus; F/4.8; stop, F/8; dull light; $\frac{1}{100}$ second; Cramer Inst. Iso.; Duratol; print, Contrast Studio Cyko.

Mrs. C. B. Fletcher's attractive portrait, "Irma," page 91, fittingly concludes an enjoyable series of pictures in the Guild department. The well-poised head, the curly, loosely-arranged hair framing a comely face and covered with a shapely, close-fitting cap, is lighted judiciously to yield soft shadows. However, one regrets that the pose of the figure is marred by the raised left shoulder and the tightly-drawn drapery. Having said this much, we would wish that the left arm, or the hand holding the flower, might be visible. Data: Century Grand camera; lens at full aperture; west window; 3 seconds; Cyko Prof. Studio print.

ON THE GROUND-GLASS

Edited by WILFRED A. FRENCH

A New Photographic Disease

OWING to a typographical error, which occurred in this office, recently, the word "Camerists" was spelled "Camerisis." Thus, has been discovered, by mere accident, the name of the disease with which so-called camera-fiends are afflicted.

A Clever Publicity-Act

A POPULAR soubrette strolled into a well-known photographic studio one afternoon, recently, to have some new portraits made. Entering, she discovered the place filled with college-girls, who were there for a similar purpose, and she was at once inspired with the desire to pass herself off as one of the students. What a lark that would be!

Having passed inspection before the mirror, she nonchalantly walked from the dressing-room into the studio and, unrecognized by the new assistant operator, she was accorded several perfunctory sittings. A few days later came the proofs, which showed that the photographer had not done justice to her good looks. Considerably vexed at the outcome, she sent for her publicity-agent, with whom the situation was discussed. He advised the charming artiste to patronize a rival establishment, which happened to be next door. Here she was immediately recognized, the case was explained, and the result was a series of most delightful portraits. Gratification of artist No. 2; mortification of artist No. 1. Total result — a novel and artistic bit of publicity for the actress!

A Triumph for the Tank

If there are any workers who doubt the efficiency of tank-development, they may be interested in the following incident.

Attracted by a convincing statement among the last eight advertising-pages of PHOTO-ERA, one of our new subscribers purchased a five-inch Kodak Film-Tank, and began to use it without delay. The film to be developed contained indoor and outdoor subjects, the exposures naturally being varied, but which afterward proved to have been somewhat undertimed. However, having the utmost faith in his new acquisition, the camerist filled the tank with developing-solution (regular Eastman powders), inserted the film and adjusted the cover, faithfully following the directions by reversing the tank every five minutes.

At the expiration of the allotted time, twenty minutes, he proceeded to remove the cover; but having been screwed on too tightly, it refused to give. Yielding philosophically to the inevitable, our camerist set the tank aside until the cover could be removed by an expert in the city, which was done after a lapse of forty-four hours!

The dealer, knowing the facts in the case, expected the film to be entirely ruined, but to his astonishment each exposure was found none the worse for the long confinement. Having been somewhat underexposed, the film-negatives showed little evidence of overdevelopment. They were slow printers, that was all.

If this does not speak volumes for the practicability of the developing-tank, nothing can.

Handling the Customer

NOT long ago our attention was arrested by this caption. Of course, it meant the management of the customer after he had entered the studio. But it reminded the Editor of the habit of some operators, or posing-artists, of laying a cold, clammy hand — sometimes both hands — on the bare shoulder or arm of the gentle sitter. She would wince, say nothing and try hard to look pleasant; and — well, she never entered that place again. Many a studio-proprietor has lost customers in this way, but never discovered that this may have been the cause. Fortunately the wisdom of not touching the sitter at all is realized by sagacious portrait-artists, and now one rarely hears of complaints of this sort. Ladies who have had the unpleasant experience, referred to, would mention the subject only to their friends, though never to the studio-proprietor or his employees. "Handling the customer" should not be taken literally.

In their zeal to please or divert their sitters, some operators unwittingly annoy them, perhaps by saying too much, rather than too little; or imprudently referring to an unwelcome subject. But all this belongs more properly to the personality of the operator, which has been mentioned previously in PHOTO-ERA.

Emergency Eye-Glasses

PHOTOGRAPHIC knowledge, even if it be theoretical, is sometimes useful in everyday-life. The Editor had the misfortune recently to break his eye-glasses, both glasses being shattered by falling on a hard-wood floor. He was entirely alone at the time and, being thus helpless, he was unable to read fine printed matter. That is the trouble with persons who are afflicted with compound astigmatism. Desiring to obtain the address and number of an optician from the telephone-book, and remembering the action of the diaphragm in photography, he at once improvised a temporary substitute for his broken eye-glasses. Taking a piece of newspaper, he made a small, round hole with the point of a lead-pencil. Holding the tiny orifice close to one eye, he was enabled to read with ease the desired information in the telephone-book. After having communicated with the optician, he continued his experiments with the miniature stop, which measured about $\frac{1}{32}$ inch in diameter, and found that, used as before, it reduced the illumination of objects considerably. Transparent shadows became opaque; detail in shadows disappeared, and near objects looked smaller than when viewed through the eye-glasses.

It is this same pin-hole which takes the place of the regular lens in a pin-hole camera and produces perfect photographs. The reader will derive much diversion and knowledge by experimenting in a similar way; but only briefly, as peering through so small an aperture is apt to impose a strain upon the eye. Of course, a pin-hole more than $\frac{1}{32}$ inch in diameter will yield only a blurred image. It's an interesting lesson in optics.

Of the Same Opinion

She — So they returned your manuscript! It is too bad.

He — Yes; that's what the editor said about it.

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Edited by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department
Address all such communications to The Crucible, PHOTO-ERA, 383 Boylston Street, Boston

Ozobrome with One Bath

If a census could be taken among ozobrome-workers as to what was their greatest difficulty with the process, the answer would no doubt be, the difficulty of obtaining a series of prints of equal density and contrast, writes Wm. R. Jackson in *The Amateur Photographer*.

This is undoubtedly the bugbear of this most beautiful process, and is caused by the tissue having to be such a short time in the acid-bath, even when the half-strength bath is used. To get a print any bigger than half-plate size equally flooded with the acid-solution in from 15 to 30 seconds, is a much more difficult matter than it appears. Another point is that the acid-bath, after being used for a few prints, becomes appreciably contaminated with pigmenting-solution, which causes later prints to be far too dense and too contrasty.

For my own method I claim no originality, as I believe it was used during the early days of the process. The method is simply to mix the pigmenting-solution with just enough of the chrome-acid solution to produce a print of the desired contrast and density. Contrary to my expectations, I have found the mixed solutions to keep quite satisfactorily. A solution mixed last March was found to be in good condition when used in September, after standing in a dark bottle all the summer.

Suitable proportions of the two solutions are given in the following table; other proportions can, of course, be tried by the worker, according to the result required.

Personally, I prefer to use the first bath, making a soft bromide print, so as to obtain as good gradations as possible, developing fully; but the exposure must be so adjusted as not to give a really black print, or the

Parts by Volume of Pigmenting Solution	Parts by Volume of Acid Bath	Result
3	1	Plucky ozobromes from flat gray bromides.
11	4	Ozobromes of the same density and contrast as the original bromide.
5	2	Normal ozobromes from dense or contrasty bromides.

final ozobrome would be too dense. The bromide, after being well fixed, washed and dried, is trimmed so that no trimming is required on the final ozobrome.

The tissue is soaked for about three minutes in the mixed solution, and then brought directly into contact with the bromide print under water, finally squeegeeing into close contact on a glass slab.

Ten minutes is ample for the print to bleach. The print is then transferred to the transfer-paper in the usual manner.

Loosening a Tight Stopper

A WRITER in *Photography and Focus* suggests a steady stream of very hot, but not boiling, water being poured upon the neck of the bottle, and points out that this method must not be used with sulphuric acid or anything which a little water entering at the stopper might injure. Precautions are also advised to avoid breaking or bursting the bottle. How much simpler is the method of tapping the stopper with another piece of glass, yet we have never known it to fail. One or two sharp, but not hard, taps upon the fast stopper have always produced its immediate release; but it must be glass on glass.

A Fixing-Bath for Bromoil Printing

MR. JOHN W. GILLIES, an American devotee of the Bromoil process of photographic printing, now gaining rapidly in popular favor, writes that alum in the fixing-bath very naturally hinders the swelling of the gelatine and that the following formula, in his experience, seems to do better work:

Water	64 ounces
Hypo	16 ounces
Sodium bisulphite	1 ounce

Shutter-Speeds and Exposures

ONE of the greatest difficulties in the way to obtain accurate exposure appears to us to be the inaccuracy of most modern shutters. We have a considerable number in our hands from time to time, and it is most usual to find the higher speeds actually only about a third of what is marked on the indicator. It is sometimes stated that the focal-plane shutter gives more reliable exposures; but even here when we rely on increasing the tension of the spring to shorten exposures, we are very likely to find error. We have tested focal-plane shutters on trains passing the camera at right angles to the line of sight and in such circumstances that a speed of sixty miles an hour would never be exceeded, and we have almost invariably found far greater blur than would theoretically occur on a calculation of shutter-speed, movement of object, and the relation between focal length and distance from lens to object. The focal-plane shutter, however, has this advantage, that the spring-tension may be kept constant and the exposures, varied by altering the width of the slit, will give double the exposure obtained by a quarter-inch slit, assuming the spring tension is left unaltered. It is quite unusual to find that professional photographers use shutters for their work, and this is probably because they find the difference between what they want to give and actually do give is much less with a stopped-down lens and a cap exposure than with a large aperture and an instantaneous shutter.—*British Journal of Photography*.

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Professional Photographers' Society of Pennsylvania

THE Executive Board of this Society has arranged for the coming convention at Scranton, March 17, 18 and 19, 1914. Reports of the different committees give promise of an exceptionally large attendance.

The print-exhibition this year will be elaborate. The committee has arranged for an exclusive exhibit of masterpieces from the studios of the most noted photographers outside the Society. The exhibition will be divided into four classes, as follows: Class A, Cabinet Class; Class B, Portrait Class; Class C, Art-Portrait Class; and Class D, Commercial Class. Entries in each class must consist of three prints, except Class A, which requires six pictures. Exhibits may be framed or unframed, but must not bear the name of the photographer.

Judges have been selected to judge all pictures and a certificate of rating will be issued to each exhibitor. All pictures will be criticized by the judges and the criticisms will be printed in book form. Ten of the best pictures exhibited will be selected and reproductions of them printed in the book. A copy of this book will be mailed to each member of the Society.

Some twenty pictures will be selected from the exhibits and reproduced in the form of lantern-slides. Each picture will be criticized by an artist from the artist's standpoint and next by a practical photographer, who knows photographic conditions. This criticism will prove very instructive to all photographers.

The Committee on Instruction reported a most elaborate program — something entirely new, but practical. In fact, it means three days' training in practical photography from a business standpoint. The program carries with it demonstrations along lines never before attempted. The very best talent possible to obtain has been engaged to give these demonstrations, and no expense will be spared to carry out the program to the letter.

The Manufacturers' Committee reports a program calling for an entirely new departure in the manner of exhibiting their wares. Each manufacturer or dealer will be called upon to provide not only attractive but educational displays with the most practical instructors, demonstrators and salesmen in charge.

While the majority of the time will be given over to educational work, yet the social side has not been lost sight of. As many ladies are expected to be present, the Committee on Entertainment has provided a most excellent program which will be thoroughly enjoyed by all. A theater-party will be arranged for one evening, when a splendid play will be attended at one of the best theaters, with an extra sketch added to the program, known as "Fun in a Photograph-Gallery." The Convention will conclude with a banquet and ball. For further particulars, address W. G. McCaa, Secretary, South Bethlehem, Pa.

Johnson and Moose

MISS BELLE JOHNSON, the well-known photographer of Monroe City, Mo., has entered into partnership with Roy Moose at Pittsburg, Kan. The new studio will be opened under the name of Johnson and Moose.

A Persistent Competitor Succeeds

It has been pointed out previously in these pages that Round Robin Guild competitors have occasionally tried their fortune with the advanced workers (PHOTO-ERA Competition) and attained success; also, that participants there who had not won anything higher than Honorable Mention have tried how their pictures would fare in the Beginners' Competition. And thus it is that Mrs. C. B. Fletcher, an admirable picture-maker, whose "The Portals of Sunset" might have been more successful had the competition in that particular contest been less keen, now captures second prize, her entry being a charming subject treated with high artistic skill and reproduced on page 91.

The Bissell Colleges

AMONG the students to enroll last month were Mr. C. F. Cann, Finland, Russia, and his sister, Miss L. Cann. After finishing the photographic course they will locate in Australia. Mr. H. Sakakura and Mr. K. Kurosawa, two Japanese young men, also enrolled during the month.

Mr. H. Yonekura, who recently finished a course in engraving and three-color work, has returned to Honolulu, where he will be employed on the Hawaiian-Japanese newspaper in that city. Mr. Yonekura says that several of his friends will start for the college on his arrival home. He has been particularly successful in three-color work.

Mr. Christ. Stoycoff, student of 1907, has just returned to this country from Bulgaria, his native land, where he participated in the recent wars in that part of the world.

Grand Rapids Camera Club

At the recent annual meeting the following officers were elected: President, H. M. Long; Vice President, John L. Benjamin; Secretary, Miss Harriet M. Goodrich; Treasurer, George E. Fitch; Executive Committee, the officers and Dr. W. A. Rawson. The club is starting on its seventeenth year, has a membership of thirty-five, and on its rolls are eight members who have exhibited in the American Salons and two in London. During the last few months the club moved into new quarters and has added much in the way of equipment.

William F. Van Loo

It is with sincere regret that we chronicle the death of William F. Van Loo, of Toledo, President of the Photographers' Club of Toledo, and a member of the P. S. of Ohio. Mr. Van Loo died of cerebral hemorrhage, December 31, stricken while apparently in the best of health. Practically his entire life had been spent in Toledo, where he entered the photographic profession at the age of eighteen. For twelve years he was associated with Frederick J. Trost, but for ten years was alone in business, and became well known in the profession. Mr. Van Loo was prominent in Masonry for many years. He was a thirty-second degree Mason and belonged to a number of lodges.

BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices.

THE BRITISH JOURNAL PHOTOGRAPHIC ALMANAC, 1914. Edited by George E. Brown, F.I.C. Fully illustrated. Price, 50 cents, postage 27 cents; cloth, \$1.00, postage 37 cents. London: Henry Greenwood & Co., publishers; New York, U.S.A.: George Murphy, Inc., 57 East 9th Street, sole American sales-agents.

The sincere praise bestowed on each issue of this standard work as it has appeared annually with unfailing regularity, applies also to the current issue, the fifty-third volume of its existence. The popularity of the publication is attested by the large amount of the advertising that it carries, viz., four-fifths of the entire contents, which is actually over two and one-half inches thick! The very practical and accurate contents includes among the usual welcome features a directory of amateur and professional societies in all English-speaking countries; recent novelties in apparatus; a list of English manufacturers of plates and papers; formulae for the principal photographic processes; equivalents in German, French and Italian of the chief photographic terms; list of the principal text-books on photography; comprehensive list of tables of miscellaneous photographic interest; list of photographic periodicals.

Among the many new features are a series of sixteen reproductions of negatives and prints illustrating an exhaustive article on faulty exposure, with a faulty and correct development of a given subject, by C. H. Hewitt, F.R.P.S.; *Epitome of Progress*—by the Editor—General, Apparatus and Equipment, Photographing Various Subjects, Negative-Processes, Printing-Processes, and Color-Photography.

The advertising-pages present the various material of the principal manufacturers throughout the world, and evidence the tremendous activity among the photographic industries.

THE STORY OF PANAMA—The New Route to India. By Frank A. Gause and Charles Carl Carr. Profusely illustrated. Price, \$1.50; postpaid, \$1.63. Boston, New York and Chicago: Silver, Burdett & Co.

Not since Columbus discovered America, will the commerce of the world have experienced so remarkable a change as through the operation of the Panama Canal. The optimistic Ferdinand De Lesseps, having conceived and constructed the Suez Canal, almost immediately arranged to break through the Isthmus of Panama and mingle the waters of the two great oceans. The great French engineer was backed by a powerful syndicate; money, machinery and men were at his disposal; but serious, unforeseen obstacles, including disease, thwarted his plans and, after a physical struggle of seven years, the expenditure of \$260,000,000 and the loss of thousands of human lives, the great project was abandoned.

It was left for American genius, sagacity and pluck to recommence the arduous task, although advised to desist by jealous foreign powers; and after the American Congress appropriated the necessary funds—soon discovered to be inadequate—work was started and the huge task, popularly called the greatest engineering feat of modern times, is now virtually an accomplished fact. It is something in which every American can

take a just pride, for the enterprise owes its success entirely to American capital, labor and skill. The story is told briefly, accurately and interestingly by the two joint authors. The pictures which support the text, are original photographs, and they demonstrate convincingly what hardships the French engineers had to face; how little they actually accomplished; the condition of the works as they left them; the splendid sanitary preparations made by their American successors; the gigantic dimensions of the excavations by the new engineers; the huge locks; the work under way in several sections of the canal; the living-conditions of the army of workmen, etc. The history of attempts by early explorers, Columbus, Balboa and Cortez, to seek a water-passage to the Pacific, form other attractive chapters of this instructive volume. Soon the celebration of the completion of the Panama Canal will be upon us, and the sooner we are informed on the history and condition of the Great Waterway, the better.

A NEW CHAPTER IN AN OLD STORY. By the Search-Light Library. With copious illustrations printed in two colors from photographs by P. P. Pullis. Price, boards, 50 cents. New York, 299 Broadway: Remington Arms-Union Metallic Cartridge Co.

Many business-firms have published noteworthy souvenir-books in the past; but few have succeeded to produce one at once so artistic and of such absorbing interest. While its mission in part is to celebrate in a fitting manner the merging of the Remington Arms Co. and the Union Metallic Cartridge Co. into one concern, it is, in fact, much broader—to tell by word and picture the history and development of arms of offense and defense, from the rock-missile of the cave-man of prehistoric times to the most modern types of present-day rifles. This it does in a letterpress as entertaining as fiction, treating in turn the sling, the bow and arrow, the cross-bow, the hand-gun, the matchlock, the flint-lock, the musket and all the more modern types with which we are more familiar.

Everything is illustrated by photographs and reproductions of old engravings and other prints. Page-arrangement has been made a feature, with the result that the turning of every leaf gives a pleasant surprise. Border designs, no two alike, reproduced from pencil sketches and printed under a tint, serve as a running accompaniment to the text, framing and tying the type-matter to the illustrations. Seven full-page photographs, posed by trained models using hunting-pieces of historical accuracy, show clearly the most important stages in the development of firearms. They are unusual examples of photography in which Mr. Pullis may well take pride.

As a literary presentation of a frankly commercial subject, this book promises to be epoch-making in its field. Certainly it indicates that the dramatic values of business life are of a high order and worthy of literary treatment. In this case the story is a remarkable one, involving international complications, romantic reversals of fortune and interesting personalities. It is a business biography rather than history, closing with a detailed tour of two of the largest and most modern factories for the manufacture of rifles and cartridges in America or in the world.

As an example of the application of photography to book-illustration, this is among the best which has come to our attention. Every sportsman will prize a copy for his reference library, particularly at the nominal price of fifty cents, which, of course, is considerably less than the cost of production.

LONDON LETTER

CARINE AND WILL A. CADBY

CLOSE on the heels of Coburn's publication of "Men of Mark" there was opened at the Camera Club (Adelphi, London) an exhibition of "Poets and Publicists," by Hector Murchison, referred to briefly in our last letter. With the exception of three ordinary bromide enlargements and one platinum print, the pictures are all made in bromoil and, hanging side by side, they certainly compare very favorably with the ordinary photographs, both in quality and strength. Mr. Murchison is a master in handling the oiling-brush and, during a walk around the gallery, he confided to us that in his opinion successful oiling is a knack; either one possessed it or one did not, and the worker who had not the gift would save time and avoid endless disappointments by simply giving up bromoil and kindred processes that needed the oil-brushing movement. This, probably, is true; but the knack of laying on the ink is only a very small part of Mr. Murchison's skill, for all the pictures show the intuitive handling of an artist and the sensitive sympathy of the man with his sitters, many of whom, nervy, brainy people, must have been difficult to coax into the easy, natural, everyday attitudes in which he represents them.

Writings for readers who live so far away and are not likely to see the pictures, it is, perhaps, better not to go into the particular merits of individual photographs, but rather to note the characteristic features of the show. This is the first entirely bromoil portrait-exhibition that we have seen, for the two or three ordinary enlargements included are not strong enough to alter the effect, and there is no doubt that this method, in capable and artistic hands, is excellently suited to exhibition-work. There is a quality immediately observable when entering the Gallery far nearer akin to etching than to photography when used in the old sense of the word. Of course, it is a photographic effect for all that, and we rejoice that such work can be done by what its enemies call "a mechanical process."

One of the bromoils of John Masefield has been transferred to etching-paper, and the result is excellent. With the exception of the portrait of Mrs. Nesbit Bland (E. Nesbit, the well-known writer of children's stories) all the photographs were taken in the Camera Club studio, and incidentally give a striking lesson in the variety of lighting that can be rung out of a few screens and curtains.

The chief photographic event of the month, in our opinion, is the publication of "Scott's Last Expedition" (Smith, Elder & Co.). The book is published in two big volumes, very profusely illustrated with photographs, most of which were taken by Mr. Herbert G. Ponting. There are a few colored reproductions from watercolors and a small number of photogravure plates from sketches, both the work of Dr. Wilson; but without in the least depreciating these charming pictures, it is to the photographs that we turn for the true tale of Captain Scott's last journey to the South Pole. Many of Mr. Ponting's photographs are really beautiful. The subjects were exceptionally grand to start with, many being unprocureable in any other latitude, and he has done them justice. He brings the South Pole regions very near to us.

It may not be out of place to quote what Captain Scott wrote in this book of Ponting in regard to his photographic work. On page 234 he remarks: "Of the

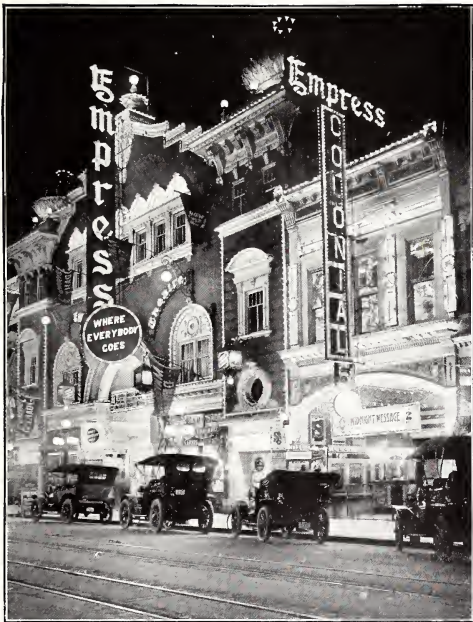
many admirable points in this work perhaps the most notable are Ponting's eye for a picture and the mastery he has acquired of ice-subjects; the composition of most of his pictures is extraordinarily good; he seems to know by instinct the exact value of foreground and middle-distance and of the introduction of 'life'; whereas with more technical skill in the manipulation of screens and exposures he emphasizes the subtle shadows of the snow and reproduces its wondrously transparent texture. He is an artist in love with his work."

This is all precisely true; and it is not too much to say that, had the photographer who accompanied the expedition been merely a skilled technician and not an artist, the illustrations would have lost a great part of their value; for, after all, it needs the artist's eye to see and reproduce the "local color" which makes these pictures so convincing. There are pictures of storms and pictures of still, calm days and nights, and all alike suggest an atmosphere and a scenery totally unknown and new to all save those who have been in Arctic regions. To photographers who know Mr. Ponting's work at exhibitions, and who admire his Japanese studies, these illustrations will be of particular interest, showing another phase of his work.

The town, or rather the press, has been very full just lately of Messrs. Harrods' gift to the nation of the Tal-



From Harrod's Costume-Collection Bertram Park
A tinsel-embroidered muslin frock, period 1800-10



Copyright, 1913, Smyth and Hickish

Night Pictures

are difficult to make successfully unless you have the right lens. To get good, clear, well-balanced negatives, even

under these difficult conditions, you should use a

Bausch^{and} Lomb-Zeiss TESSAR LENS

The wonderful quickness of the Ic Tessar, which has three times the speed of ordinary lenses, its accuracy and illuminating power, give it a grasp of the most trying circumstances. The Iib Tessar is 61% faster than the ordinary camera lens and is adjustable to almost any hand camera.

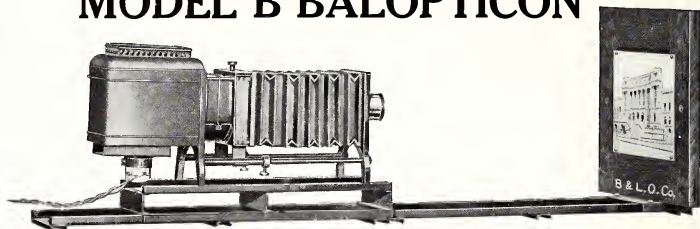
We will gladly send you a sample print and information regarding lenses. You can try a Tessar on your camera—Ask your dealer.

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Enlarging and Lantern-Slide Making with MODEL B BALOPTICON



Model B Set Up for Enlarging (with Incandescent Lamp)

Three Outfits in One:

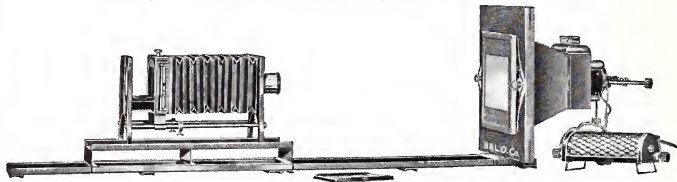
Balopticon for Lantern-Slide Projection, Enlarging-Camera and Lantern-Slide Camera

Accessories for enlarging and lantern-slide making include:

1. Special Holder for negatives up to 4 x 5 in., an area approximately 4 in. in diameter being illuminated.
2. Easel-Board, accommodating 11 x 14 in. paper, held either vertically or horizontally.
3. Frame for holding negatives up to 5 x 7 in. —attaches to easel-board after removal of central portion of board; lamp-house with ground-glass
4. Special Frame, fitting in slide-carrier support and taking ground-glass and lantern-slide plate-holder.
5. Metal Tracks with mounting for Model B Balopticon and easel.

Model B Balopticon is supplied with either arc, incandescent or acetylene lamp, as desired, and may readily be used separately for regular projection.

Send for special circular or further information.



Model B Set Up for Lantern-Slide Making (with Arc-Lamp)

BAUSCH & LOMB OPTICAL CO., 622 St. Paul Street, Rochester, N.Y.

bot Hughes Collection of Costumes. As one periodical expressed it, this collection was in "urgent peril" of crossing the Atlantic! To prevent this catastrophe (?) Messrs. Harrods purchased it for the nation. The costumes date from the early eighteenth to the late nineteenth century, from Queen Anne to Queen Victoria, forming a priceless pageant of dress as worn between these periods. Mr. Bertram Park, the well-known and busy secretary of the London Salon, was commissioned by Messrs. Harrods to get suitable models, dress them in the various costumes, and make photographic studies of them. These have now been published in book form (shillings, 2/6), and this volume cannot fail to increase in interest and value as time goes on.

Mr. Park has made a great success of his part of the work and it was not at all easy. He is a careful and deliberate worker, who aims at pictorial effects, so is not easily satisfied; yet he had very little time allowed him to get his work through. Everything had to be exactly in keeping with the period—the tapestry chosen for a background must be of the right date and every little accessory the same. We saw Mr. Park when he was engaged in this undertaking and he told us some of its difficulties. The original platinum prints are now on exhibition at the Little Gallery of *The Amateur Photographer*, where, in quite a small room, the different costumes of many years—the actual, real clothes of the time—draped on real people, can be studied side by side. It is most interesting to look at the fashions of long ago with the eyes of to-day. There is nothing in the women's dress that at all resembles the present tight skirt; but one or two young girls' evening costumes of about 1800 are very similar to dresses worn by girls in their teens a few years back, and have quite a familiar look.

Mr. Park, with Messrs. Harrods' permission, kindly allows us to reproduce one of the studies at the Little Gallery in PHOTO-ERA.

Karl W. Wolf-Capek

WE regret to learn, from the last number of *Photographie für Alle*, of the sudden death, on November 19 last, of its editor, Herr Karl Wilhelm Wolf-Capek, in whom the German photographic world loses one of its ablest and most prominent literary representatives, who possessed a rare knowledge of the technical, scientific and artistic aspects of photography. This knowledge found practical expression in his numerous works on photographic subjects and as editor of *Photographie für Alle*, *Photographische Industrie*, the *Deutscher Camera-Almanach*, etc. Notwithstanding his large amount of literary work, his activity in practical photography was tireless, and with all this he was interested in the india-rubber business and, particularly, in aeronautics. Herr Wolf-Capek was only thirty-six years of age, and his ripe knowledge on a wide range of subjects gave promise of great things had he been spared. His thorough knowledge of photography was appreciated by both professional and amateur photographers, and his amiable qualities endeared him to a large circle of friends.

Cleveland Camera Club

THE second exhibition of photographs under the auspices of this club was held at the Case Library, December 1 to 15, 1913. Eighty-two prints by twenty-three exhibitors were shown, and a very interesting collection it made, especial interest naturally being centered in a group of Mexican scenes by George M. Nesbitt. This club is to be congratulated upon steady growth although handicapped by adverse conditions.

Announcement by Secretary Hoffman

BEGINNING with 1914, the Photographers' Association of America will have for its motto the single word, "service." As the new secretary of the Association, I should like to make this idea stand out above all the others—service not alone at convention-time, but for all the other fifty-one weeks of the year. Service to each individual photographer and to photography as a profession. It would be a little premature for us to say just now along what line our efforts will be spent. We must investigate and find out what can be accomplished which shall benefit the photographers from a business as well as from an artistic standpoint. Along this line let me say that suggestions from any photographer, whether a member of the Association or not, will be received gratefully. May I ask that these suggestions, no matter how trivial, be sent to me at Bucyrus, Ohio?

That the Association is starting on a new epoch is the belief of every one in touch with the welfare of the photographers. Tradesmen, business-men and professional men are all organized for self-protection. The time has come for every photographer to unite with the organization, which has for its sole aim the subserving of his interest.

We need a large organization, one which will have some prestige, one which shall be able to protect the profession from foolish legislation, commercial discrimination and popular misconception. We need the co-operation of every photographer to carry out this work. May we count on you?

Edward L. Allen

WITH the death, January 6, of Edward L. Allen, passed away the last surviving member of Allen & Rowell, for many years the leading photographers in the city of Boston. The work of this firm was distinguished for the greatest technical skill and refined artistic excellence, and commanded the highest prices. Most of their portraits were printed in carbon, of which process Mr. Rowell was a noted expert. Mr. Rowell made the sittings, while Mr. Allen managed the business-affairs and the office, although active in the work-rooms when required. Mr. Allen was eighty-four years old at the time of his death.

Sold Out Early

TAKING no chances to be overstocked with copies, the American agents of the *British Journal Almanac* and *Photograms* imported prudently the current issues of these two popular annuals. The first has become a virtual necessity to the practical worker and is specially good this year—see our review in this issue—and the other presents in an unusually attractive form the latest work of the world's foremost pictorialists. As early as January 5 both agents reported, "Not a copy left."

South London Photographic Society

THE Twenty-Sixth Annual Exhibition of this society will be held at the South London Art-Gallery, Peckham Road, S. E., from March 21 to April 14 inclusive. Three classes are of an international character, as follows: A—Pictorial Photography. B—Autochromes, etc. (sets of four). Lantern-Slides (sets of four). C—Scientific and Nature Study (sets of four prints).

Two silver and six bronze medals will be awarded in Classes A, B and C, at the discretion of the judge, Mr. A. H. Blake. Certificates of Honorable Mention will also be issued for meritorious work.

BERLIN LETTER

MAX A. R. BRÜNNER

IN looking over the photographic journals of any country, we note that the sharply-focused picture is giving place to the blurred one, with the exception, of course, of certain subjects, such as architecture, machinery and the like. There are different ways to obtain such an artistic effect, most of which have been known for some time. But those mentioned below may not have become very popular, therefore a short description may prove valuable.

There are certain tricks to produce a soft print from a sharp negative, one of which is to put a piece of Japan paper between the plate and the sensitive paper in the printing-frame. We obtain thus a peculiar surface like that of silk, somewhat resembling gum-prints. The best effects are obtained with matte albumen papers. Instead of the above we may employ parchment paper or one or more layers of transparent celluloid. The prints will assume the appearance of carbons if we insert some piece of paper, or silk or cloth with a screen in it, by which, with certain subjects, quite an original effect is obtained. Of course, there is a large variety of these screens from the finest to the roughest, according to the number of lines to the inch. Another way is to put one or two thin sheets of clear glass between the negative and the paper, and in proportion to the distance between the two surfaces the finished print will lose its sharpness. Care, however, must be exercised to remove any dust or grit from the various surfaces, as otherwise scratches or other defects will result. The best way is to use discarded negatives of the same size from which the film has been thoroughly removed. Often certain sections are more dense and require a stronger light for printing within a reasonable time. We can overcome this difficulty by employing a mirror which we place in such a position that the sunlight falls upon those portions. It is necessary to watch printing, as the sun moves, and besides, we should alter slightly the position of the printing-frame. Quite another way is to insert into the plate-holder a piece of opal glass as thick as the ordinary negative. It must be of good quality and without any blisters or spots, as the rays of light will go through it first and then hit the ordinary negative. It must be placed in such a way that the matte side of the opal glass faces the opaque slide, that is, the lens, while its glass side faces the film of the negative. Consequently there is a distance of the thickness of one glass plate between the opal covering and the film layer, and the result is a remarkable softness of the pictures while yet all details are preserved. The focusing and exposing are done in the usual way and we need scarcely lengthen the exposure, if a white glass is employed. It is different with a colored one. There is a possibility to increase the softness, if you wish, by inserting two sheets of glass and thus doubling the distance between the opal glass and the film. Acting in the described way, pictures will be obtained where the eyes do not look, like those of wax figures, or the skin not like leather; in addition, the impurities of the latter will not be visible, and a saving is made in retouching. The advantage of this and the former methods is that they can be employed with any imaginable subject—whole figures and heads, landscapes, still-life and with any kind of paper and all sizes.

Speaking of methods for obtaining better pictures, I may mention a good way to ascertain the correct exposure

for such views where the ordinary exposure-tables will fail. This applies particularly to interiors and to night-pictures. There is a growing interest for the latter in this country, at least, and in all exhibitions we see examples of them. But no one can yet say what time night-pictures require for making a good negative. Even the expensive exposure-meters cannot be used here with advantage. The method described herewith was discussed at a recent meeting of an amateur society which the writer attended, where specimens of night-pictures were shown which greatly pleased the audience. We take an ordinary plate-holder and draw lines on the slide and number them. Having inserted a fresh plate and put the filled holder in the camera, we draw out the slide as far as mark 1 and make a certain exposure of a night-view, counting the seconds or minutes during which the shutter was open. Then we pull out the slide as far as mark 2, and again make a note as to the length of exposure. In this way we continue, stopping at mark 3, 4, etc. When we develop the plate, we find strips of varying density, one of which is just of the kind which pleases us most. Comparing the strip of the negative with the mark of the slide and our notes, we find out what length of exposure was necessary, and we may thus repeat the exposure on another night from the same standpoint and under the same conditions, by which a perfect negative will result. If, in addition, we write the notes upon the print and put the various conditions into consideration, we may, after we have tried this method with different views, such as street-scenes, moonlight, flat country, brilliantly-lighted show-window, etc., be able to dispense with the trial-negative entirely later on. At any rate, whether we use it or not, it is advisable to take a small camera for this purpose or, in case of a large one, to insert a small dryplate, using a kit to save expense.

In a former letter the writer mentioned various societies and gave particulars about the rights and duties of their members. The "Hilfsverein der Photographen Oesterreichs, Wien" just informs us that at the death of a prominent member, the widow received at once the amount of four hundred Kronen, as the number of members was at the time two hundred. This is the second time that this club has carried out its very humane mission, viz., to assist the widow and children of deceased members. According to the by-laws of the society, at the death of a member each surviving member is assessed two Kronen (50 cents) for the benefit of the widow. Consequently, if there are, as in the cited case, at the time of a death two hundred members, the sum would be four hundred Kronen (\$100). Compared to these privileges, the membership-fee is very small—only three Kronen a year. This club is intended for anybody who is engaged in the photographic business, irrespective of sex or nationality, or whether employer or employee. The social aims of the club find sympathy in all circles concerned with the photographic trade; and many firms, dealers and manufacturers frequently send in voluntary contributions.

A New American Ski-Jump

CONTRACTORS are rushing the construction of the big trestle at Mt. Horeb, Wis., which will rise to a height of 100 feet above the ground. It will be 150 feet long and will give the ski-er a start of about 180 feet before shooting him off the "hump" for his jump. The new scaffold is entirely of steel. It is the sixth steel-ski-trestle in the world. If it is properly constructed, it will give the ski-er a momentum of nearly eighty-five miles an hour at the jumping-point.

No. 3A FOLDING INGENTO

The Biggest Value in a
Folding Camera



For Pictures $3\frac{1}{4} \times 5\frac{1}{2}$ Inches

Many good people have an idea that all cameras are about alike and hence that one instrument is as good as another. The No. 3A Folding Ingento is radically different from the rest and it is these points of difference we want to drive home: The track upon which the lens standard operates is $2\frac{7}{8}$ inches wide—this means absolute rigidity. The focusing-screw is built into the bed; nothing to pull out or get broken. The focusing-scale has an automatic aligning-device. The box is of aluminum, covered with genuine cow-hide leather. Size closed $1\frac{3}{4} \times 4\frac{11}{16} \times 9\frac{5}{8}$ inches. Weight 36 ounces. The lens is a carefully-tested rapid symmetrical. The No. 1 Model is fitted with the famous Ilex General Shutter while the No. 2 has an Ilex Universal Shutter, giving variable instantaneous exposures up to $\frac{1}{150}$ of a second.

The 3A Folding Ingento is a camera that incorporates every feature desirable in a hand-camera. It is built for service and gives it.

PRICES

3A Folding Ingento, Model 1 . . . \$20.00
3A Folding Ingento, Model 2 . . . 25.00

Manufactured and Guaranteed by

BURKE & JAMES, Inc.
242-244 E. Ontario Street
CHICAGO

New York Office and
Salesroom

225 Fifth Avenue

INSIST ON INGENTO



PERFECTION

OF THE

M. Q. Tube

THE OLD WAY



You lose some of the necessary chemicals also, have bits of broken glass in your developer.

The "Agfa" Way



Soft lead ends, and no corks.
Contents run freely from the
tube. 10 ounces developer,
5 cents.

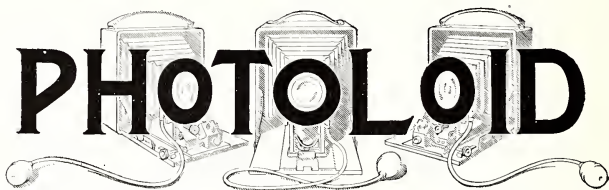
Ask your dealer for the
"Agfa" M. Q. Tube.

Berlin Aniline Works

215 Water Street, New York

PHOTO-PRINTING REVOLUTIONIZED

by



Its

5

**"NEW ERA"
FEATURES**

Imperishable

**Needs
No Mounting**

Non-curling

Washable

Quick Drying

PAPER AS A PRINT-MATERIAL IS NOW SUPERSEDED—
an incredible announcement seemingly, yet one, nevertheless, true.
PAPER IS REPLACED BY PHOTOLOID—the greatest innovation
in photography and the only real improvement for many years.

*PHOTOLOID is a hard, impervious waterproof emulsion,
on a tough, flexible double-weight, water- and chemical-proof
backing, either translucent or opaque, with matte surface.*

PHOTOLOID is printed like any "gaslight" paper but is easier
to handle and more certain in its results.

PHOTOLOID gives results equal to the finest carbon and platinum
work, but with the tediousness and uncertainties eliminated.

PHOTOLOID is a tremendous time-saver—prints can be made,
developed, fixed, thoroughly washed and dried within thirty minutes.

PHOTOLOID simplifies washing because of its non-porous and non-
absorbent qualities—and PHOTOLOID positively will not curl up in
the solutions.

PHOTOLOID prints combine with brilliancy of tone, unusual
delicacy and beauty in the high-lights and remarkable depth of shadow.

PHOTOLOID absolutely ensures artistic pictures, and, most vitally
important of all, PHOTOLOID PRINTS ARE PERMANENT. The
emulsion will not fade nor the backing decay.

PHOTOLOID is made in the Porcelain White, Veined Ivory and
Cream. Blacks, Sepias, Olives and Grays printed by direct development.
PHOTOLOID takes watercolors easily, making wonderful miniatures.

PHOTOLOID MARKS A NEW ERA IN THE ART OF PHOTOGRAPHY

See your dealer at once—if he cannot supply you,
write to us. We will promptly fill all orders
accompanied by remittance. **BE SURE TO
SPECIFY COLOR AND SIZE.**

The pictures *you value* surely deserve to be
printed in permanent form. There is only one
way—PHOTOLOID, the greatest "development"
known in photography.

Size	Packets of half dozen	Packets of dozen	Half gross box
3 1/4 x 5 1/2	\$.50	\$.90	\$ 5.00
5 x 7	1.00	1.75	10.00
8 x 10		4.00	22.50
10 x 14		7.00	40.00

The Fiberloid Company 55 Fifth Avenue
NEW YORK

Correspondence invited with dealers regarding special proposition

WITH THE TRADE

Our Friends Send Christmas Greetings

AMONG the season's greetings, in one form or another, sent out quite generally last Christmas, the one of the Victor Animatograph Company was unique and appropriate. It was an effectively-colored miniature Viopticon slide of a lighted candle illuminating the greeting, "Merry Christmas" (in red), surrounded by a wreath of holly (in green). Those recipients who were fortunate enough to own a Viopticon—the smallest high-grade stereopticon for home-use, on the market—were glad to include this timely subject in the set of slides shown during their Christmas entertainments.

The idea of making up calendars by tastefully combining a photographic print from a favorite negative, a calendar-pad and a multiple mount, was utilized very

to those likely to need a word of cheer screaming caricatures of themselves and garnished with verses that would have sent perpetrators other than themselves to jail.

Not a few of our friends, gifted with executive artistic skill, sent original sketches either in color, monochrome or pen-and-ink. Of the last-named class nothing could be more novel and dainty than the clever drawing, by E. O. Hoppé, of a fanciful conception of the Tango, shown below. The "caprice" doubtless was suggested by the furore created by the Russian dancers in London, not long ago, and Mr. Hoppé had made numerous interesting photographs of members of the company.

Then the Christmas-cards, most of them of the commercial sort, were sent out by almost everybody; but what particularly endeared them to the recipients was the few words written by the senders, themselves, and expressing cheer and good-will.

The Spell of Assur

It must have been the magic sound of "Assur," a name brought down to us from Assyrian antiquity, and now applied to a popular make of oil-colors, that influenced a well-known amateur photographer to step into a supply-store, recently, and ask for a box of "assur-chromatic" plates. The request, however, was easily understood by the salesman, who promptly handed the customer a box of isochromatic plates, and received in return full payment plus a few words of approbation.

Ilex Shutters

THESE splendid instruments are fitted either with bulb or antinous releases. It is well to remember this because once an antinous release has been used, no other will do. This is not the only advantage of Ilex shutters, as a descriptive catalog clearly explains. Chief among them is uniformity of every marked speed every time the shutter clicks.

Ability Test-Chart Competition

THE \$25.00 prize for the best print of the Ability Test-Chart sent out by Allison & Hadaway, 235 Fifth Avenue, New York, was awarded to C. N. Spoelstra, 745 Crofton Street, S. W., Grand Rapids, Mich.

Of the seven hundred and ninety-two prints admitted, forty were selected for final examination and after the most rigid tests had been applied, one of the four prints submitted by Mr. Spoelstra was finally selected. Mr. Spoelstra furnished the following details in connection with the print which won the prize: "This print was made through the use of two filters, one after the other, during the exposure. The yellow filter used by me was too light to hold back the blues sufficiently, and at the same time get the reds correct, so I used the red filter to get correct values where the yellow filter was not sufficient. I made several negatives before I got the proper ratio with my plates and filters. They follow: stop, F/64, yellow filter, 20 seconds; stop, F/64, red filter, 2½ minutes."

The judges were Col. Theodore Marecun, Thomas Bedding, F.R.P.S., and Carl Ackerman.



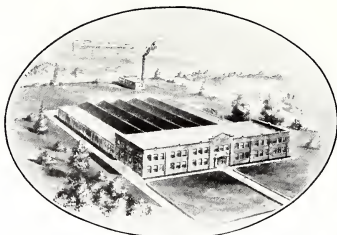
generally by amateur and professional workers. The Editor was very generously remembered. Among the specially artistic designs received by him were those by Minya and Rudolf Dührkoop, Germany; Alexander Murray and F. W. Hill, Boston, U.S.A.; Everett R. Bolander, Richmond, Ind.; William Ludlum, Jr., Mount Vernon, N. Y.; Harold A. Taylor, San Diego, Cal.; H. O. Bodine, of the Wollensak Optical Co., Rochester, N. Y.; and E. E. Doty, Battle Creek, Michigan.

The professionals blessed with the sense of humor that annihilates gloom, melancholy and other joyless states of mind, were also busy remembering their friends at Yuletide and the dawn of the new year. J. C. Strauss, of St. Louis, and George W. Harris, of Washington, were conspicuous in this respect, sending

The New Wollensak Factory

LAST year the Wollensak Optical Co. decided to build a new factory in order to take care of its growing business. Accordingly the company purchased a tract of land situated in the outskirts of the city, and containing three and a half acres. The new plant will be ready for occupancy early in March, 1914.

The new factory will contain over forty thousand square feet, which doubtless will take care of the firm's needs for a while; and as there is plenty of land in reserve, additions can be made at any time without interfering with the operation of the plant.



A BIRD'S-EYE VIEW OF THE NEW FACTORY

The new factory will be a model of its kind, having every convenience for the employees, and the latest machinery for doing the work as well and as quickly as possible. The front building is one hundred and seventy feet long by thirty feet wide, and two stories high, with the offices and shipping-rooms located on the first floor, and the Assembling-Department, Lens-Testing Department, etc., on the second floor. Back of this building will be the factory proper, one story high, and measuring one hundred and seventy feet square.

The Wollensak Company has asked us to extend a cordial invitation to readers of this publication to visit the plant when in Rochester, at which time everything that is possible will be done to make their visit a pleasant one.

A Cheerful Optimist

BANGOR, ME., Dec. 31, 1913.

Wilfred A. French,

Dear Sir: I like Merryman's snow-pictures, particularly that one of Mt. Pleasant, for they look like snow-scenes we have in Maine. Real snow, white snow, no smoochiness or doubt about it, so, of course, they are not art; but they are good to look at, and we can admire the picture even if the maker may not be an artist.

I also like Mr. Riley's explanation of climate; I quote: "This is simply because the air in higher altitudes is dry. The dampness of *city-air* is what chills." Is it the city-charter that does it?

Bangor has a city-charter and the air is dry and the altitude at the Custom-house is twenty-three feet. Not much higher than Boston, is it?

If I had taken "The Pearl of Orr's Island," I should be proud the rest of my life.

It seems that you have given us a very attractive number. Happy New Year to you.

WILLIAM H. BLACAR.

Cooke Lenses at Reduced Prices

THE Taylor-Hobson Company announces that after February 15, 1914, the prices of most Cooke anastigmat lenses will be reduced. The new prices will be printed in all the Cooke lens catalogs circulated after that date, and will show a reduction averaging from 10 to 15 per cent on most sizes. This reduction has been made possible by the change in tariff, and should prove interesting to those photographers who desire the best lenses that money can buy, and who wish to purchase one or more such lenses during the coming season. The sales of Cooke lenses have increased rapidly during the past few years and should now exceed all records.

The Retort Courteous

"THE photograph flatters you," commented the earnest young man.

"Then it is more polite than you are," replied the indignant maiden. — *From the Buffalo Express.*

Meyer Specialties

THOSE discriminating camerists who delight to learn of exclusive photographic devices, particularly ingenious importations from the German market, will find them in the store of the Meyer Camera and Instrument Company, 18 West 27th St., New York City. Among the most popular of the new instruments may be mentioned a vest-pocket tripod for cameras up to 5 x 7, and a pocket ruby-lamp for traveling, each selling at \$1.00. A new line of developing-tanks, ranging in price from \$3.25 to \$5.00, is also being shown, as well as the popular Polygon cameras fitted with Rietzschel double anastigmats.

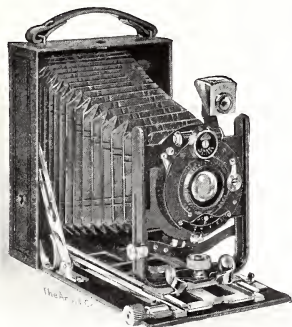


MADE WITH A SERIES 4 EURYNAR, F/4.5

An Euryнар for Dark Days

DURING these short winter days, when the light yellows and wanes after 3 P. M., a lens of large working-aperture and high correction is needed. An Euryнар will very likely meet the requirements, and the American agents, W. J. Lafbury Co., 305 North Fifth Ave., Chicago, will gladly send circulars and prices on request. The accompanying illustration shows something of the splendid work of a Series 4 Euryнар, F/4.5.

GOERZ TENAX



TARO TENAX

IS THE NAME

OF A LINE of Hand-Cameras, including models which differ widely in details of construction, but which have three points of superiority in common. *Goerz Lenses and Cameras* can be fittingly described only by using superlatives; and we have the testimony of many enthusiastic amateur photographers to confirm our claim that "TENAX" stands for

**MAXIMUM STRENGTH
MINIMUM BULK**

and WIDEST RANGE OF USEFULNESS

THE VEST-POCKET TENAX, for pictures $1\frac{3}{4} \times 2\frac{3}{4}$ in., and COAT-POCKET TENAX, $2\frac{1}{2} \times 3\frac{1}{2}$, have a wonderful record of efficiency. They are the *strongest pocket-cameras on the market*, and second to none in compactness and range of successful work.

THE STEREO POCKET-TENAX, for plates or films $1\frac{3}{4} \times 4\frac{1}{4}$ in., is a wonderful little instrument of precision, yielding the most realistic effects that can be obtained by photography.

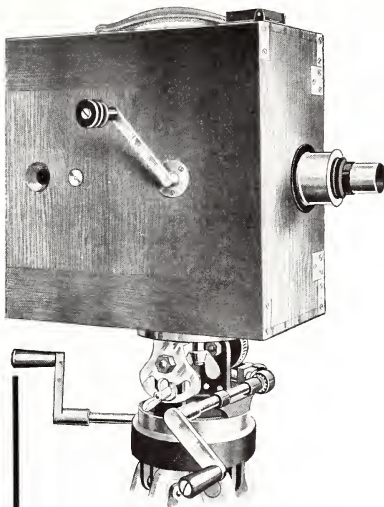
THE TARO TENAX, in two sizes, and MANUFOC TENAX, in four sizes, are all-metal cameras of extra-compact construction and long bellows-extension, with which a single combination of the lens may be used alone as well as the complete anastigmat.

Plates or film-packs may be used with any of these cameras. All of them are fitted with GOERZ DOUBLE ANASTIGMAT LENSES.

Order from your regular dealer, who will give you further information, or inquire of

C. P. GOERZ AMERICAN OPTICAL CO.
323 $\frac{1}{2}$ EAST 34th STREET, NEW YORK

Dealers' Distributing-Agents West of Ohio:
Burke & James, Inc., Chicago



THE ENSIGN CINEMA CAMERA

DAYLIGHT LOADING

Make your own motion-pictures with the Ensign Cinema Camera: Loads in Daylight like your film-camera; you make the exposure, we develop free and make positives. You can immediately be a successful cinematographer — no darkroom or finishing required. Camera of mahogany or teakwood, neat in appearance, simple of operation. The camera size is $9\frac{1}{2} \times 4\frac{1}{2} \times 9\frac{1}{2}$ and weighs only 7 lbs. 10 ozs., loaded with 100 feet of film. Fitted with a Zeiss-Tessar lens F/3.5, the standard lens for motion-picture cameras at any price.

PRICE-LIST

Ensign Daylight-Loading Cinema Camera,	
Zeiss-Tessar Lens, F/3.5.....	\$80.00
As above, Teakwood, heavily reinforced	
with brass	85.00
Special Tripod with revolving head and	
tilting top	40.00

Send for descriptive circular

G. GENNERT

24-26 E. 13th St., New York
CHICAGO and SAN FRANCISCO

When Ordering Goods Remember the PHOTO-ERA Guaranty

CLASSIFIED ADVERTISING

Thirty Cents per Agate Line. Minimum Four Lines. MONEY MUST ACCOMPANY ALL ORDERS. Forms Close the Fifth of Each Month Preceding the Date of Issue

PHOTO-ERA, 383 BOYLSTON STREET, BOSTON

BOOKS

PHOTOGRAPHIC HANDBOOKS—The most compact and practical information ever printed for photographers is contained in our books at 10 cents each. "Retouching for Amateurs," "Secret of Exposure," "How to Take Portraits," "How to Make Enlargements," "Manual of Photography," "Practical Development," "Popular Printing Processes," "Hints on Composition," "How I Make Lantern Slides." The nine for 75 cents. AMERICAN PHOTOGRAPHY, 218 Pope Bldg., Boston.

BIND PHOTO-ERA YOURSELF with a Big Ben Binder, the simplest binder made. If you bind your magazines every month upon receiving them they will not be lost or mutilated. You can find what you want quickly. Price \$1.00 postpaid.

THE WELCOME PHOTOGRAPHIC EXPOSURE-RECORD AND DIARY, 1914. A complete manual of all printing processes, developing, intensifying, reducing, etc. Full and extremely helpful treatise on exposure in all conditions, including photography at night, interiors, copying and enlarging. The exposure-calculator makes failure impossible. Postpaid for 50 cents. PHOTO-ERA, 383 Boylston St., Boston, Mass.

FOR SALE

FOR SALE—Studio in De Land, Florida, the home of John B. Stetson University. Fitted to 11 x 14. High-grade portraits, developing and printing, amateur supplies, picture frames. Other work requires my attention. C. S. GARDNER, De Land, Fla.

INSTRUCTION

"DADDY" LIVELY'S SOUTHERN SCHOOL OF PHOTOGRAPHY, at McMinnville, Tenn., opens Jan. 1, 1914. Special post-graduate course during February. Write for catalog. Endorsed by PHOTO-ERA as a thoroughly trustworthy institution.

MONEY IN PHOTOGRAPHY. You can start home-studio with your camera. We tell how. Details, portraiture, retouching, and sample pictures sent free. WELLS' STUDIO, East Liverpool, Ohio.

PHOTOGRAPHS

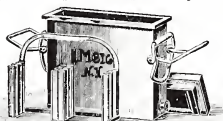
PHOTOS OF THE MEXICAN REVOLUTION showing both Federals and Rebels, ruins, barracks, cavalry, artillery, etc. 25c. each. Juarez race-track scenes. 10c. Send money-order. No stamps accepted. W. G. CONGER, El Paso, Tex.

PHOTO-ERA ARTIST-MOUNTS in various colors and textures, 24 sheets in a portfolio 10 x 12½ inches sent for 35 cents postpaid. Detailed description in PHOTO-ERA for January.

SITUATIONS WANTED

REQUESTS for Positions as Salesmen, Operators, etc.; also studios, photographic apparatus, etc., for sale or exchange, *cannot be advertised in PHOTO-ERA, unless accompanied by convincing proofs of the ability, character and business-integrity of advertisers unknown to the publisher.*

Tank for 4½ x 6 and 6½ x 9 cm. plates



Dimensions: 1½ x 4 x 4 inches

MEYER CAMERA & INSTRUMENT CO., INC., 18 West 27th Street, NEW YORK

Importers of and dealers in the famous POLYGON CAMERAS fitted with the unsurpassed RIETZSCHEL DOUBLE ANASTIGMATS. (From miniature size up)

DEVELOPING-TANKS

The safe and convenient way to bring out everything that is in the plate, even allowing over- and underexposures; compact, light- and water-tight, reversible, convenient for traveling, and making the darkroom superfluous.

PRICES: for 12 plates, 4½ x 6 cm., or for 6 plates, 6½ x 9 cm. \$3.25

For 12 plates, 4½ x 107 mm. 4.50

For 6 plates, 3½ x 4½ inches, or 3½ x 5½ inches (larger sizes also made). 5.00

Pocket ruby-lamp with safety ruby-glass and safety candle. Dimensions: 1½ x 2½ x 3½ inches. .50

Traveling ruby-lamp, round, with safety candle, with metal foot and hood, and metal cover, all nickel. Very compact and practical. 1.00

Vest-pocket tripod in leather etui; can be carried in one's vest-pocket; will hold any camera up to 5 x 7 inches. 1.00

Other European specialties

Any article sent postpaid to any part of the United States

PHOTO-ERA GUARANTY

PHOTO-ERA guarantees the trustworthiness of every advertisement which appears in its pages. Our object is to secure only such advertisers who will accord honorable treatment to every subscriber. We exercise the greatest care in accepting advertisements and publish none which has not been proved desirable by the most searching investigation. Thus in patronizing such advertisers, our subscribers protect themselves.

If, despite our precautions, the improbable should occur and a subscriber be subjected to unfair or dishonest treatment, we will do our utmost to effect a satisfactory adjustment, provided that, in answering the advertisement, PHOTO-ERA was mentioned in writing as the medium in which it was seen. The complaint, however, must be made to us within the month for which the issue containing the advertisement was dated.

WILFRED A. FRENCH, Editor and Publisher.

DURATOL

NON-POISONOUS
RAPID DEVELOPER

STABLE

NON-FOGGING

NON-STAINING

Prepared solutions retain their developing-energy for many months
and may be used many times over

40 ounces of developing-solution require 15 grains of DURATOL and develop from
250 to 300 4 x 5 prints

One Formula can be used for Plates, Films, Gaslight and Bromide Papers

Request Sample and Directions from

SCHERING & GLATZ

150 Maiden Lane
New York, N. Y.

ILEX

ILEX ANASTIGMAT F. 6. 3.

— AND —

ILEX Acme Shutter 1 to 1-300th of a Second

The Ideal combination for snow scenes in dull dark wintery weather,

$3\frac{1}{4} \times 5\frac{1}{2}$

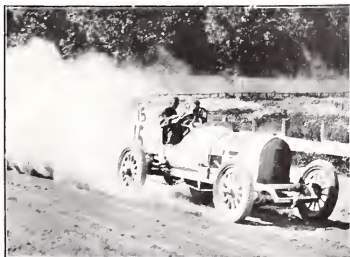
\$30.00

4 X 5

Sent through to you through your dealer on ten days trial. Catalogue
free on request.

ILEX OPTICAL COMPANY, 547 Ilex Circle, Rochester, N. Y.

ILEX



COOKE LENSES

Series II. F/4.5

SERIES II Anastigmats have a snap and brilliance
all their own. For high speed photographs with
cameras like the Graflex, they are unrivalled, yet they
may be stopped down and used like other lenses for
ordinary work.

THE TAYLOR-HOBSON CO

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Learn a Paying Profession

that assures you a good income and position for life. For twenty years we have successfully taught

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Photo-Engraving and Three-Color Work

Our graduates earn \$20 to \$50 a week. We assist them to secure these positions. Learn how you can become successful. Terms easy. Living inexpensive. Write for catalogue — NOW!

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910 Wabash Avenue, Effingham, Illinois

Works like a fast lens

Aucelo Flash-Light Powder

The fastest powder made. Gets everything but the movement. Best for large gatherings. No closed eyes. No movement. For the amateur it is like putting a high-grade lens on your machine. Safe to handle. Little smoke. Aucelo cartridges make perfect pictures in the home. Also one- and four-ounce packages.

Ask your dealer

The Photo-Chemical Co.

3041 Cortland Street

Chicago, Ill.

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It's all in **STARTING RIGHT!** My latest booklet "PROFESSIONAL POINTERS" contains much valuable information that will save you many wasted dollars, years of fruitless labor and perhaps eventually failure. Send P. O. order for 50 cents **NOW** and **START RIGHT!**

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"COSMO" PHOTOGRAPHIC POSTCARDS AND PAPER

Unexcelled for brilliancy and detail. An assortment of one dozen each of our six grades of Postcards or Paper sent prepaid on receipt of 50 cents. Samples upon request. Postcards made from your own negative.

PACIFIC PHOTO-PAPER CO., 82 Third Street, San Francisco

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Are the Finest and Best Inks and Adhesives



Emancipate yourself from the use of corrosive and ill-smelling inks and adhesives, and adopt the Higgins' Inks and Adhesives. They will be a revelation to you, they are so sweet, clean and well put up, and withal so efficient.

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Photo-Mount Paste
Drawing-Board Paste
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Office Paste
Vegetable Glue, Etc.



Plates in
this issue

were made
by us

High-Grade Cameras at Reasonable Prices

We manufacture VIEW, FOLDING and BOX CAMERAS AND PHOTO-ACCESSORIES, with the purpose that they shall be the best in their respective classes. Ask for Catalog.

CONLEY CAMERA COMPANY
507 Main St., Rochester, Minnesota

PARALLAX

An Enlarging Lamp of Great Power
Simple Construction, Lightweight, Inexpensive, makes Enlargements in One Second.

A Mazda bulb is duplicated 30 times with 30 Mirrors; The lights converge and blend into one another which gives the desired soft light without condensing lenses.
11 in. Reflector for \$37 negatives, \$8.00; 15 in. for 8x10, \$15.00. For Circular write R. D. Gray, Ridgewood, N. J.



FOR SALE — Standard Photo. Books at Reduced Prices, including Why My Photographs are Bad (Ill.); C. M. Taylor; \$1.00; for 50 cents. Portrait Studio Lighting (Ill.); C. Klary; \$1.00; for 75 cents. Photography (Ill.); E. O. Hoppe; \$2.00; for \$1.75. British Journal Almanac, 1913, 50 cents; for 35 cents. Composition in Portraiture, Sidney Allan. \$3.00; \$2.50. PHOTO-ERA, 383 Boylston Street, Boston, Mass.

COPIES OF PHOTO-ERA WANTED to complete volumes for binding. Must be in good condition, both advertising and text sections. April, 1908; July, 1909; March, 1910; January, 1912. In exchange for each of these the publisher will send PHOTO-ERA for three months free. Address PHOTO-ERA, 383 Boylston Street, Boston, Mass.

B. F. KEITH'S BIJOU THEATRE

545 Washington Street, Boston, Mass.

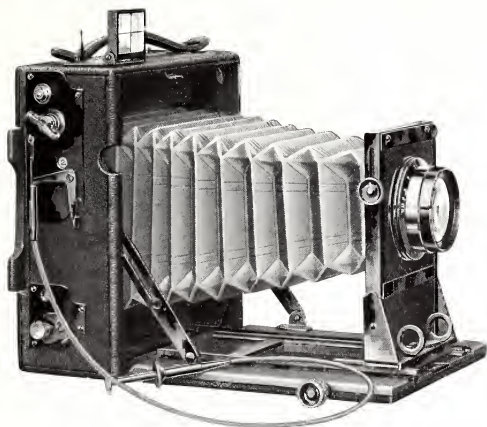
Open 9.45 A.M. to 10.30 P.M.

Motion-Pictures

Of carefully selected subjects, including
The Pathé Weekly, Stereopticon-Views of the choicest photographic subjects, are a part of the regular program
Musical Numbers, including a One-Act Operetta or Play, will be included in the program until further announcement

JOSEPHINE CLEMENT, Manager

THE SPEED GRAPHIC



A high grade Focal Plane Shutter Camera, made in the Graflex Factory.

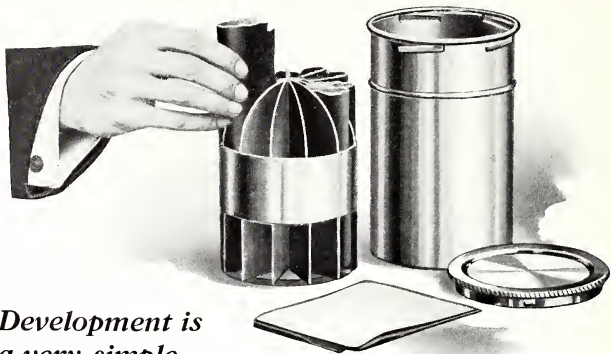
The Graflex Focal Plane Shutter, working at any speed from "time" to 1-1000 of a second, is built into the body of the Speed Graphic, and a big, generous front board permits the use of fast Anastigmat Lenses. The long, black leather bellows harmonizes perfectly with the oxidized metal and black ebonized woodwork.

Full particulars are given in the Graflex Catalog—free on request.

FOLMER & SCHWING DIVISION

EASTMAN KODAK CO.

ROCHESTER, N. Y.



*Development is
a very simple
matter with the*

Premo Film Pack Tank

No skill, no experience whatever, is required.

You merely mix a developing powder in the tank, and fill it up with water to the embossed ring. Then load the films in the cage, place cage in tank, put on cover, and leave films to develop automatically for twenty minutes.

This is all you do, excepting to turn the tank, end for end, several times during the course of development.

A school boy can do it, and when instructions are followed, perfectly developed negatives are bound to result.

There's a Premo Film Pack Tank for each size of Premo Film Pack films. Fully described in the Premo catalogue, a copy of which will be mailed to any address on request.

Rochester Optical Division

Eastman Kodak Co.

Rochester, N. Y.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

A CHAT ABOUT WATER COLORS.



Have you tried coloring your prints? If not you have missed one of the most fascinating features of photography.

Vast amounts of money have been expended in experiments in color photography but down to date, water colors offer the practical medium for adding the attractions of color to one's photographs.

Velox Transparent Water Color Stamps offer a simple inexpensive medium for the amateur. The stamps are supplied in book form, twelve colors in each book, the most convenient and practical way. The leaves of color are perforated in portions a little larger than a two cent stamp, so the amateur may remove them for use as wanted.

In addition to the colors all that is required is the print to be colored, a saucer to mix the colors in, a tumbler of clear water and three brushes of vary-

ing widths. Colors should not be mixed too strong—a weak color is more easily handled and worked about on the print than a strong color.

The blending quality of Velox colors accounts for the fact that even in the hands of the inexperienced they give soft and pleasing effects. Of course, just as in photography itself, one will improve with practice but very little skill is really required and the amateur colorist is soon able to add to the attractiveness of his photographic collection and then too, there's the fun of doing the work.

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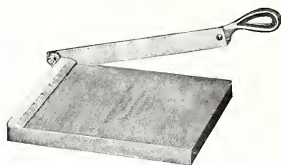
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PHOTO-ERA

The American Journal of Photography

Vol. XXXII

MARCH, 1914

No. 3

PUBLISHED MONTHLY BY WILFRED A. FRENCH, 383 BOYLSTON STREET, BOSTON, U. S. A. Entered as Second-Class Matter June 30, 1908, at the Post-Office, Boston, under the act of March 3, 1879.

YEARLY SUBSCRIPTION-RATES

United States and Mexico, \$1.50 postpaid. Single copy, 15 cents. Foreign subscription, \$2.25 postpaid. Single copy, 1 shilling. Canadian subscription, \$1.85 postpaid. Single copy, 20 cents. Agents for Great Britain, Houghtons, Ltd., London.

ADVERTISING-RATES ON APPLICATION

WILFRED A. FRENCH, Ph.D., Editor; PHIL M. RILEY, Associate Editor
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CONTENTS

ILLUSTRATIONS

The Little Lady	Miss Reineke	Cover
Fern	Gerhard Sisters	106
Portrait of a Child	Sara F. T. Price	108
Robert	Frances and Mary Allen	109
The Fuller Sisters	Alice Boughton	111
The Spider	Virginia M. Prall	112
"This Little Pig went to Market"	Goodlander Sisters	113
Suspense	Nancy Ford Cones	114
Goldie	Katherine Jamieson	115
Portrait	Jeanette Buhlman	116
Joy	Belle Johnson	117
The Little Lady	Miss Reineke	119
"At the close of the day, When the hamlet is still"	Mary Carnell	122
Day-Dreams	Katherine Bingham	123
Head of a Man	Clara Estella Sipprell	124
Annie	May L. Smith	124
A Winter Landscape	F. W. Hill	126
"The breaking waves dash high"	F. W. Hill	127
Study	M. L. Vincent	128
"Who Are You?"	Dr. H. D. Hutchins	129
Animal-Photographs	Kate Hecht	130-133
Madroña-Berries — First Prize, Christmas Cards	Mrs. C. B. Fletcher	137
Christmas-Morn — Second Prize, Christmas Cards	Erwin Marty	138
A Wise Man from the East — Third Prize, Christmas Cards	Anson M. Titus	139
When We Went Carol Singing — Honorable Mention, Christmas Cards	Alexander Murray	139
An Autumn Landscape — First Prize, Beginners' Contest	Walter L. Brown	140
"Daddy says it burns!" — Second Prize, Beginners' Contest	Roland B. Hall	141
Sheep Grazing — Third Prize, Beginners' Contest	Marshall Fowler	142
Woodland-Shadows — Honorable Mention, Beginners' Contest	Irene Libby	142
In the Sheepfold	Marshall Fowler	143

ARTICLES

The Influence of Women in the Photographic Profession	Pearl Grace Lorhr	107
Water for Photographic Purposes	David J. Cook	110
One Developer for Plates, Films and Papers	Phil M. Riley	117
The Development of Film-Packs	E. L. C. Morse	121
The Flashlight-Season		125
B. Y. M. C. U. Camera Club	F. W. Hill	127
My Animals and My Camera	Kate Hecht	130



FERN
GERHARD SISTERS
WOMEN'S FEDERATION OF THE P. A. OF A.



PHOTO-ERA

The American Journal of Photography

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No. 3

The Influence of Women in the Photographic Profession

PEARL GRACE LOEHR

President, Women's Federation of the P. A. of A.

THE workers of the world who have won renown in any profession or in any art are those who have gone beyond the rules which have governed that profession or art.

A comparison of any work which the world has recognized as great with one that is rated as good, reveals the fact that they are based upon the same fundamental law, and have been wrought in obedience to the same rules; but one is born to live, the other to die.

Why is one great and the other mediocre? If the law and the application of the law have been recognized and followed by each worker, why are not both products equal in value? One worker has studied the law and followed the rules, and they become the limit of his achievement—he has the “letter of the law that killeth.” The other worker has likewise studied the law and followed the rules—not as the limit of his endeavor, but as his guidance; for he also has grasped the spirit of the law and it is the spirit which kindles the undying flame that lights every great work.

For a worker to be able to break away from the accepted rule and guide, and also to grasp the spirit of the law in his work, there must be a cause that has produced some great emotion, something that has set thoughts on fire with anticipation; there must be the excitement of a conflict and a struggle for things before unattainable.

It is but a few years since a new social and a new industrial condition, profoundly affecting the life of women, manifested itself in the world. A deep-seated evolutionary law worked so inexorably and so silently that the condition came upon the great mass of women unawares, and they found themselves forced by the thousands from the sheltered home into the business-world. It is this condition which has awakened emotions that seek expression in many fields of

endeavor. It has caused a revolution in the status of women and in the attitude of mind of women the world over. Women were not equipped with the knowledge, nor had they acquired the training for the business and professional world. They were received as interlopers, unskilled laborers who served for lower wages. At first the struggle seemed a losing one; but gradually, out of the conflict with new conditions and the confusion that surrounded the early efforts, have come women who are finding their way and establishing their rights by the quality of their work to enter and work ably in many of the professions and industries of the world.

Photography is a business which is particularly suited to women, and the progress and improvement in the work of that profession within the past few years leads to the question whether it has been brought about through the influence of the women who have entered it as a life-work.

The photographer's tool is the camera. With this instrument any photographer can make “good, straight photographs,” which had long been regarded as the end for which it was made—a mechanical thing producing mechanical work.

Entering the profession unhampered by training in the rigid rules said to govern the picture-making tool, women broke the rules and failed, went beyond the rules and caught glimpses of new things, and, with that painstaking conscientiousness possessed by women who are in earnest, they went back to the beginning and have worked out in their own way the making of photographs.

The women who have chosen this work have brought to it those qualities of character and the sentiments they formerly confined to home-life. Their love of beauty and truth, backed



PORTRAIT OF A CHILD

SARA F. T. PRICE

by the emotion kindled by the struggle for a place among the world's workers, shows in the product of their hands and minds. They have brought more than study and training, they have brought a fine aptitude in an understanding both of the working-materials and of human nature, and this finds expression in the work of the women who are rapidly becoming leaders.

The influence of such work is being felt throughout the profession. Women in their enthusiastic efforts at self-expression, with a clear vision of things within and beyond the limits formerly set as a standard of work, are making pictures that are filled with vitality; some are almost seers in their ability to portray character and show forth the inner life of the subject. By intuition, it seems, they have

grasped the truth that the work of the camera is not the end, but only a means by which the individuality of the worker, thoroughly conversant with her materials and her tools, may portray the inner character.

They owe this power to their sensitive and sympathetic feeling which they have for their work, and their ability to secure in instantaneous flashes the expression of the real character. They make of themselves merely avenues through which to express an inner emotion with the aid of the camera.

A few years ago a well-known critic asserted: "Photography is still only a tool almost uninfluenced by the mind of the operator." This criticism does not apply to-day. Women of different temperaments are working as operators and they stamp their mind, sentiment and



ROBERT

FRANCES AND MARY ALLEN

individuality upon their work as surely and as clearly as did Innes or Corot.

The helpfulness of a movement must be judged by the importance of the message it brings. The period of storm and stress that attended the early transition of women from home to business is slowly ending. As the conflict clears away, we find that women workers who have made a place for themselves are bringing to the professions into which they have been forced the message of a study of a subject for its true meaning, individual effort and a higher standard of work.

To the profession of photography, which is

adding so much to the education and culture of the world by its use in the various fields of science, industry and art, women have brought a newer and a finer quality, for, added to the mastery of the technicalities of picture-making with the camera, they have brought the spirit which is lifting photography to its place as one of the fine arts.

✍

NEVER admit defeat. Realize your mistakes and correct them — but admit failure, never! The man or woman who admits defeat, is lost.

Miss Reinecke.

Water for Photographic Purposes

DAVID J. COOK

SCIENCE distinguishes two great classes of changes in matter — physical and chemical. Physical changes are superficial and leave the substance in its main properties at all times the same. Chemical changes directly affect the nature of the substance, giving new forms of matter with different properties.

A good example may be had of the changes herein referred to, and one also that will explain the purpose of this article, by dissolving a few crystals of silver nitrate in water. If the silver nitrate is pure, and if the water is pure also, we get a colorless physical solution, that is, the solid (silver nitrate) is divided into an infinite number of particles, which, intermingling with the particles of the solvent (water), form a clear, colorless solution, and the greater the volume of the solvent, or the more the solution is diluted, the finer the state of division of the solid (silver nitrate). Note that the physical solution is simply the transformation of the solid (silver nitrate), whose essence and main properties have not altered, to the liquid form.

On the other hand, should the water be impure into which the silver nitrate is dissolved; for instance, should it be impregnated with sodium chloride (salt), the solution will take on a milky appearance immediately and a white precipitate will be deposited on the bottom of the vessel. In this case it is quite evident that a change has taken place other than purely physical, and if we analyze the precipitate we shall find it to be made up of silver and chlorine (silver chloride). The silver of the silver nitrate, having greater affinity for the chlorine of the sodium chloride, has parted from the nitrogen and oxygen and formed a union with the chlorine; likewise the nitrogen, oxygen and sodium have combined and we now have two new substances. The presence of salt in the water was responsible for the chemical change which took place in transforming the silver nitrate to the liquid state.

It is just such changes as these that are at the bottom of many troubles in making up stock-solutions and in chemical photographic manipulations in general, which should teach that in order to avoid defects due to chemical changes that are not desirable, it is necessary that pure water be used in all solutions and manipulations where water is necessary. Water is likely to contain not only foreign mineral and vegetable matter, but also gases and air. By reason of its great

solvent power it dissolves a portion of whatever it comes in contact with; therefore, water, as it occurs in and on the earth, is probably never absolutely pure.

The most prevalent foreign substances in common water, besides air (oxygen and nitrogen) and matter held in mechanical suspension (vegetable and animal matter), are: carbonic acid, ammonia, sodium sulphate, sodium chloride, magnesium sulphate, magnesium chloride, magnesium carbonate, calcium sulphate, calcium carbonate, sulphureted hydrogen, potassium sulphate, potassium chloride, phosphates, bromides and iodides of calcium, aluminum sulphate, ferrous carbonate, silica, etc. Any of these substances may be found in ordinary water, and, if present in such quantities as to cause precipitation or discoloration of the solution, should be rejected as unfit for photographic purposes; however, water as generally supplied from faucet or well which is good for drinking-purposes and for cooking and does not curdle soap, may be used for most ordinary purposes without serious consequences.

Water exists in three states: solid, liquid and vaporous. Water freezes at 32 degrees and boils at 212 degrees Fahrenheit. Pure water is colorless, tasteless and odorless at ordinary temperatures, and should remain so upon being heated to boiling. It should be perfectly neutral to litmus paper, turning neither red paper to blue nor blue paper to red. Pure water for photographic purposes may be taken to mean freedom from gross impurities.

The quality of water and quantity of impurities contained therein is as varied as location, but all may be conveniently classed under two heads of soft and hard. Hard water contains more or less calcareous or magnesium salts or other impurities, the presence of which curdles soap. It is called hard by reason of its action on soap, which, instead of dissolving in the water to form a lather, cleansing the skin, combines with the salts to form an insoluble lime or magnesium soap that appears as a precipitate or scum on the surface of the water. Hard water is of two kinds — that of temporary hardness and that of permanent hardness. Boiling expels the carbon dioxide and thus precipitates the carbonates of calcium or magnesium which often appear as a crust on boilers and kettles. The temporary hard water is softened in that way. Permanent hard water contains calcium sulphate



THE FULLER SISTERS

ALICE BOUGHTON

or magnesium sulphate and is not softened by boiling, but can be softened by treating with sodium carbonate.

Soft water contains but a very small amount of impurities, and when used in washing easily forms a lather with soap. Water falling after a long rain and melted snow or natural ice is the purest of soft water, and suitable for most chemical purposes. To obtain it as pure as possible it must be collected in large earthen vessels in the open and at considerable distance from buildings and after the first fall of rain or snow, otherwise it will be contaminated with dust, carbonic and nitric acids, carbonate of ammonia and other impurities which float in the atmosphere and are washed from off the roofs.

Rain is the source of land-water, it having been taken up by evaporation from the ocean,

lakes and rivers, to be returned again. As it falls, a part flows off as surface-water in brooks and rivers, a part sinks into the earth, slowly percolates through earth and rocks and finally comes to the surface in springs and driven wells. The two sorts of water from rivers and springs differ considerably in character of their impurities. River-water is less pure than good spring-water, which latter usually contains mineral impurities, whereas river-water, though less impregnated with saline matter, because made up in considerable part of rains, is, however, much more likely to have mechanically suspended in it insoluble matter of an earthy nature and decomposed vegetable and animal matter, sewage, etc., which impairs its transparency.

Spring-water depends largely for its purity on the strata through which it flows, being



THE SPIDER

VIRGINIA M. PRALL

WOMEN'S FEDERATION OF THE P. A. OF A.





"THIS LITTLE PIG WENT TO MARKET"

WOMEN'S FEDERATION OF THE P. A. OF A.

GOODLANDER SISTERS

purest when it passes through sand or gravel or where the prevailing rock-formation is granite.

Well-water, like that from springs, is likely to contain various mineral impurities. As a rule, the purity of the water of a well will be in proportion to its depth and the frequency with which it is used.

Lake-water, if taken from the deep where it is greenish-blue, is usually pure and wholesome, but if taken from near the shore it is unwholesome on account of contamination with sewage and decomposed vegetable and animal matter, and ought never to be used for photographic purposes. Organic matter in water tinges it yellow, and this organic material is either dead or living. Micro-organisms, so minute that millions may exist in a cubic centimeter and be entirely invisible, are contained in all stagnant ponds and in much river-water.

Pure water is incapable of putrefaction, but ordinary water containing even a small quantity of organic matter in solution speedily undergoes decomposition, even in closed vessels. This is particularly the case with water kept in

wooden casks or open cisterns into which leaves and insects may be driven by the wind. Of course, mineral water such as used for medicinal purposes, sulphur water and chalybeate water containing compounds of iron in solution are totally unfit for our purpose.

All sorts of water may be purified by distillation. The process consists in vaporizing it and then cooling and condensing it again to a liquid. The first and last pints that come over, however, should be rejected as they contain ammonia and other substances which vaporize at a lower and higher temperature than 212° F. Most substances less volatile than water are left behind and it is mainly pure water that is condensed. On evaporating a drop of distilled water on platinum foil, there should be no residue, but if ordinary water be evaporated, a deposit is left, and if it be organic matter, smoke and a peculiar odor will be evolved as the residue becomes dry and is charred. Distilled water has a flat taste and to keep it pure must be hermetically sealed in a glass or earthen container, away from the air and dust. Distilled water is



SUSPENSE

WOMEN'S FEDERATION OF THE P. A. OF A.

NANCY FORD CONES

undoubtedly best for making up solutions containing substances which readily oxidize on exposure to air. Next to distilling, boiling and filtering the water will eliminate a great many of the objectionable substances. (Pyro will keep as long again in water that has been well boiled.) Boiling is sufficient to precipitate the carbonate of lime and magnesia, but the sulphates still remain.

Filtration does not remove the salts in solution, but the organic and other matter in suspension, the presence of which gives to it a turbid or muddy appearance, is eliminated by this means. The water-supply of many cities is now freed from objectionable matter by filtering it through several feet in thickness of sand and gravel extending over a large area. After a day or so the water is diverted to another similar filter, the first being allowed to dry for an equal time. In this way the water is freed from all organic matter, which is destroyed upon exposure to the air. Filtering through small charcoal or sand filters, cotton, cloth filter bag, faucet filters, etc., are of little utility, except to remove earthen matter. Filtering through a "Pasteur filter,"

or one of the porous stone filters which come from Germany, is most serviceable. Also the brown filter-paper, which comes in packages of various sizes, and which is carried in stock by nearly every photographic supply-house, and which also comes from Germany, is to be recommended.

Decantation consists in allowing water containing undissolved matter to precipitate or deposit its solid at the bottom of the receptacle. The clear solution is then poured or drawn off, leaving the sediment undisturbed behind. If the water to be purified be placed in a barrel or hogshead, and two grains of potassium-aluminum sulphate (common white alum), previously dissolved in a little hot water, be added to each gallon of water, it will facilitate matters greatly. It should be allowed at least forty-eight hours to settle, and when distilled water cannot conveniently be had, this is a good substitute.

Besides the tests for impurities in water, as heretofore enumerated, by distillation, filtering, evaporating, treating with soap, silver nitrate and with alum, the following may be employed: If blue litmus paper is reddened when moistened



GOLDIE

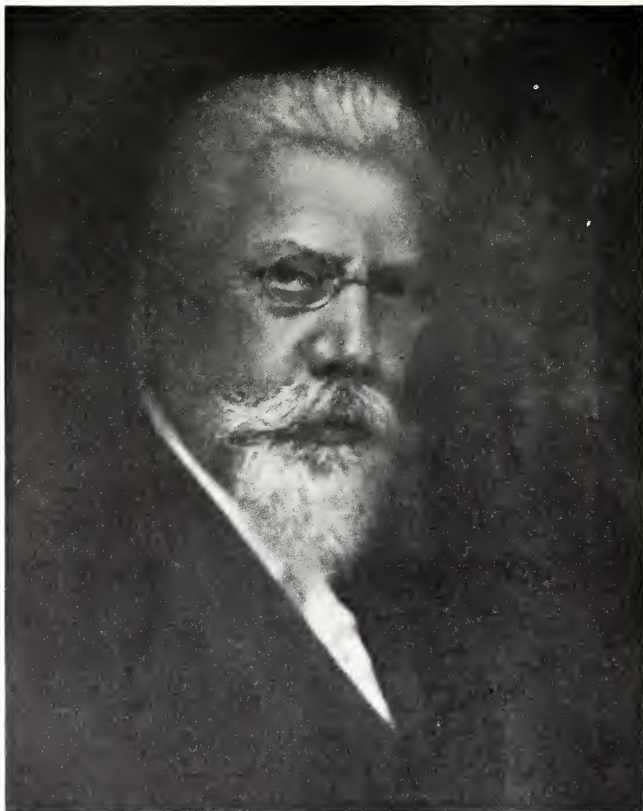
KATHERINE JAMIESON

with water, the water is acid, and if reddened litmus paper is changed to blue when placed in water, it indicates that the water is alkaline. Lime-water mixed with pure water remains transparent, but if a milkiness ensues, carbonic acid is present. Oxalate of ammonia occasions a white precipitate if the water tested contains carbonate or sulphate of lime. Phosphate of soda and ammonia added to water which contains magnesia will produce a white precipitate. Sulphureted hydrogen and hydrosulphurets give a brown or black precipitate in water containing iron or lead. To test for organic matter, add a little pink potassium permanganate solution and a few drops of sulphuric acid to the water, and if organic matter is present the color will slowly disappear. If no organic impurities be present, the color will be permanent.

Dissolved air causes frothiness of solution and air-bells on plates and films and impairs the keeping-properties of developing-solutions. Dis-

solved carbonic acid gas tends to the injury of prints in the washing-stages, also causing precipitation of carbonate of lime when solutions of ammonia or caustic alkali are used. Lime salts cause white milkiness or precipitate with oxalates, phosphates and carbonates. Salt gives milkiness with silver, lead and mercurous salts. Organic matter, which may or may not color the water, renders it unsuitable for toning-baths containing gold or platinum salts. Earthen matter will stain printing-papers, etc. Gelatine is particularly susceptible to stain, and soaking plates and paper in water for a long period is a bad practice.

Water is one of the most valuable substances used in photography and, by exercising care in this particular, many of the vexatious occurrences and difficulties met with in our every-day chemical manipulations can be avoided. Prevention is better than cure, and care in this particular is a sure preventive.



PORTRAIT
JEANETTE BAHLMAN
WOMEN'S FEDERATION OF THE P. A. OF A.





JOY

WOMEN'S FEDERATION OF THE P. A. OF A.

BELLE JOHNSON

One Developer for Plates, Films and Papers

PHIL M. RILEY

TWO friends of mine, lucky dogs, recently started for Florida by motor-boat, going from New York by the inside route, consisting of canals, bays, sounds and other protected waterways. They plan to cruise down around the Florida keys and along the Gulf coast to New Orleans. It is a free-lance, literary venture which, it is thought, will yield many practical cruising-experiences and some interesting travel-data, all of which will be illustrated by the camera-man of the party. He hopes also to photograph many interesting old houses, gardens and other picturesque objects in the many cities of the South through which they will pass.

When the entire outfit of two persons, including the necessities of life, work and play for three months must be stored aboard a 25-foot cruising motor-boat, space is at a premium. The photographic outfit for a varied amount of work was necessarily large, and included two cameras, several lenses, a goodly supply of

plates and film-packs, sun-printing and gaslight papers, and a comprehensive assortment of chemicals. All developing and printing is to be done on board. As I was asked to suggest ways to reduce the long list, the first thing that occurred to me was the provision of a separate developer for plates, film-packs and gaslight papers—the worker's favorite agent in each instance.

"Why not adopt a universal developer?" I asked. "You can get one agent that will develop any of these three emulsions and effect a great economy of space."

"I'd be glad to do so," my friend replied, "if I thought that one developer would give me as satisfactory results as my three favorites. I've seen universal developers advertised, but my confidence never seemed to be inspired. Without ever trying them in their several capacities, I always felt that they would not make good. I suppose that was an injustice to the firms which advertised them."

"Yes, it was," I had to admit. "Take Rytol, for instance, it makes good every claim for it, and a tabloid chemical is, of course, the most compact possible form. For general adaptability it has no superior. Why, only last week I was even using it as a substitute for Dianol to develop Autochromes."

"I'd thought of taking that," my friend said, "but it happens that I've never used it except for paper, and I won't have time to try it for negatives before I start. Success means so much to me in this work that I thought it wiser to use the chemicals I understand."

"You're right there," I agreed. "Now, let me see. Have you used Duratol, Rodinal, Edinol, Dianol, Aduror or Metol-Hydroquinone?"

"I know something about every one of them, and what I know is good; but I never tried any one of them in its capacity as a universal developer. I've always wanted to try Ortol, too, but never got around to it."

That put an idea into my head. I knew that I had two bottles of Ortol stock-solutions at home and a lot of work that needed to be done.

"Is there anything to prevent you from taking dinner with me to-night?" I asked.

"Why, no, I'll be glad to accept," my friend replied.

"Good. I'll give you an Ortol demonstration, show you how it works, and let you try it yourself on some of my work. It's a favorite of mine, although as a special developer or an all-round agent it is not at all superior to Duratol, for instance, which has an army of enthusiastic devotees."

After dinner we excused ourselves and retired to my darkroom, which is an extra bathroom remodeled, and so gives me plenty of running water, hot and cold.

"Ortol is sort of an old-timer now, isn't it?" my friend began.

"Yes," I explained, "a good many 'ols' have been brought out since Ortol first appeared on the market. It isn't advertised very much these days, and so the younger generation doesn't know it as well as it deserves. I'm sorry to say; but all the big supply-stores carry it, and many of their older customers will use nothing else. It is so much like their first love, pyro, in its action, that they were easily converted, and in actual practice came to appreciate highly its wider range of usefulness."

"If it has a yellowing influence like pyro, it's not suited to paper or lantern-slides."

"That brings us to the very heart of the matter," I replied. "It is a developer that acts like pyro, and its silver image is warm black, but there is no yellow staining of the

film. Look at this," I continued, holding a negative before the electric light which I use for printing. "A lantern-slide like that wouldn't absorb much light, would it?"

"Splendid," said my friend.

"Here is the bottle of salt itself and the stock-solution," I went on. "You see it's a coarse, grayish-white crystalline powder, very soluble in water, and in its dry state, when guarded from light, it keeps unchanging, hence the orange-colored bottle. This solution, you see, is colorless. It was made up with metabisulphite and keeps well. This bottle of it has been standing here for several months. It's a moderately-rapid developer free from fog, and is sufficiently sensitive to bromide as a restrainer to render it easily variable within about the same wide limits as pyro."

"Like pyro it has to be thrown away after use," I suppose.

"On the contrary, when kept in full, closed bottles the used developer can be kept for a long time and can be used repeatedly. Not until the developer becomes brown is it useless. Here's my formula in two solutions. See, it reads:

A	
Water, cold	20 ounces
Potassium metabisulphite.....	70 grains
Ortol	140 grains

B	
Water.....	20 ounces
Sodium carbonate, anhydrous	1¼ ounces
Sodium sulphite, anhydrous	13½ ounces
Potassium bromide	10-20 grains

I use it at a temperature of 65 degrees. Lower temperature retards its action as with pyro, and if you cannot maintain this standard temperature, you'd better omit the bromide."

"If you don't mind, I'll copy that formula while you make the solution ready for use," said my friend.

"Go ahead," I answered. "Ordinarily I use equal parts of A and B for tray-development, or for increased softness and slower development I take one part of each and add one part of water. The factor is 10 if you care to work that way."

"It's well to know it, anyway."

"Watch this plate, now," I announced, switching off the white light and on the ruby, after which I immersed an exposed plate in the developer, flowing the solution across the whole plate with one quick motion of the hands. "Twenty-five seconds elapsed," I finally announced, "and you can just begin to see the image. That exposure must have been about



THE LITTLE LADY

MISS REINEKE

WOMEN'S FEDERATION OF THE P. A. OF A.

right, because complete development requires usually four to five minutes. From now on, development of detail and density will proceed together and gradually, as with pyro."

While we were waiting for the time of complete development, I explained that by varying the composition of the working-solution, results can be controlled with any brand of plate or film and any duration of exposure within workable limits. More of A and less of B gives harder negatives, whereas less of A and more

of B gives softer negatives. Ortol is also more sensitive to the addition of a restrainer or accelerator than the faster developers. For that reason known overexposures are well controlled by the addition of a few drops of potassium bromide, ten-percent solution, and underexposures are made the most of by the addition of a few drops of caustic potash, ten-percent solution.

"That's great!" exclaimed my friend when I raised the negative out of a tank of acid fix-

ing-bath fifteen minutes later. "Do you happen to have a tank-formula as good as your tray-formula?"

"Copy this while I make it up," was my answer. While I weighed out the salts and dissolved them, this is what he copied:

Water	48 ounces
Potassium metabisulphite	12 grains
Ortol	24 grains
Sodium sulphite, anhydrous	78 grains
Sodium carbonate, anhydrous	78 grains

"That just fills my five-inch Kodak tank," I said, as he was finishing, "and let me give you a tip. In 4 x 5 size the tank will take the roll-film spool and apron, the film-pack cage and the plate-cage; one tank serves for them all."

"Well, that eliminates two tanks from my list, and saves a lot of room," said my friend, with enthusiasm.

Putting a spool of roll-film through the transfer-box as rapidly as I could, I got development started, telling him that at 65 degrees the total time would be about thirty minutes, but that film-packs, because of the glycerine-coating to make them lie flat, would require about ten minutes longer. A developer never really begins its work so quickly on a pack-film as a roll-film; a certain time is required to penetrate the surface-coating, which is necessary because a pack-film is not kept flat by tension like a roll-film.

"And now for the gaslight work," urged my companion. I could see that he had become genuinely interested.

"I use my tray-formula for plates when developing paper," I explained, "adding three to five parts of water—always five for bromide paper and sometimes more. Five parts is always enough for gaslight brands. Always use a test-strip to make sure that there will be no darkening of an unexposed paper for at least one minute. If necessary, add more potassium bromide, ten-percent solution, drop by drop to prevent it. The exact quantity, of course, varies with the quality of the water used."

Selecting some negatives, we made prints from them on three different popular brands of gaslight paper, and then enlarged one to 8 x 10 in a fixed-focus enlarger. All were developed successively in the same tray and in each instance the result was a good, pure black, slightly warm, but not brownish nor accompanied by any yellowing of the paper.

"They're as good as I ever saw," my friend announced after looking them over critically. "Your thirty minutes is up," he then reminded me, looking at his watch.

We opened the tank, which I had reversed end for end three times during the half hour, rinsed the film and put it in the fixing-bath. In pouring the developer out of the tank we found that it was only very slightly discolored and good for further use. In fifteen minutes I pulled out the strip of film, gave one end to my companion and we examined it carefully before the opal glass of my printing-light.

"You've proved your case," he said, turning to me with a smile. "They're beautiful, not only to look at, but they have good gradation and plenty of shadow-detail. They can't help but be good printers."

In two hours I had made a new Ortol convert. I can't swear that he took it on his trip, but I think he did. If so, he has one of the best all-around developers on the market; one that is simple, dependable, easily controlled and varied to meet different requirements, acts in a convenient time, and is economical because each solution can be used several times. It is a developer that can be employed for lantern-slides with the utmost success, giving a black image that is beautiful to look at on the screen. The regular tray-formula is well suited to this purpose.

Ortol is also a developer that combines well with another reducer, thereby yielding the good qualities of both. Perhaps the most common instance of this is Ortol-Hydro, which is recommended by the manufacturers of several gaslight papers to those who object to metol. A convenient formula is as follows:

Water	20 ounces
Sodium sulphite, anhydrous	1½ ounces
Ortol	44 grains
Hydroquinone	130 grains
Potassium iodide	100 grains
Potassium bromide	7 grains
Sodium carbonate, anhydrous	2½ ounces

For use, take one part of stock-solution and four parts water, keeping the temperature at 65 degrees. The concentrated stock-solution keeps indefinitely without discoloring in full bottles well stoppered.

[A series of formulae for other universal developers will appear monthly in *The Crucible*. A tested formula for Duratol will be found on page 149 of this issue. — *Ed.*]



A good picture is rarely the result of chance. Artistic instinct and a knowledge of art-principles and technique are absolute essentials to a high standard in picture-making.

Louis Fleckenstein.

The Development of Film-Packs

E. L. C. MORSE

FOR lightness, portability and convenience of operation the film-pack, in the opinion of many workers, is superior to the roll-film. Its price is about twice that of the glass plate and about the same as that of the roll-film.

Its disadvantages are: high price, tendency to mysterious and unaccountable streaks of light, resembling Halley's comet, and, finally, difficulty in development.

Under present conditions probably no remedy can be expected for the high price, the contrivance being protected by patents in the United States. The Lumière (French) and the Goerz (German) concerns put forth film-packs which are offered for sale in the British market, but not in America, where one must use the Premo film-pack or adopt roll-films or glass plates.

The light-streaks are said to be due to the generation of electricity on the emulsion under certain atmospheric conditions — a defect that can often be overcome by care and deliberation in pulling the tabs slowly.

The chief difficulty in handling the films during development is due to their slippery character, resembling a lot of eels in water. To be sure, there is a tank contrived for this purpose, but the operation has the disadvantages of most mechanical operations when applied to the pictorial arts. At best it is a sort of Procrustes' bed.

Procrustes, it may be remembered, in ancient times, had a bed in which he accommodated travelers who sought a night's lodging. The bed was adapted to the ordinary-sized man, but when a man of unusual size came along, Procrustes proceeded to adapt the man to the bed. If the man were too short, he was made to fit the bed by an ingenious set of ropes and pulleys which forcibly stretched the traveler until he fitted the bed. Should the poor man happen, on the contrary, to be too long, any surplus anatomy was chopped off until the man fitted the bed. The bed suited the average man very nicely, but the contrivance was tough on the unusual and exceptional man.

Tank-development does very well in the majority of cases, but it does not work satisfactorily in some cases; it strikes a fair average only under average conditions. Certain subsequent processes and effects — by no means rare — require a contrasty negative, and others require a soft negative. Duration of development determines contrast. Manifestly the time

of development must vary to achieve different effects in negatives. This is impossible in the tank-method.

On the other hand, the worker may be in a position where it is a case of either overexposure or underexposure, or else no picture at all. Knowing this, the negative may be saved by either a soak previously in weak bromide or by heating the developer, as the case may require. However, if the over- or underexposure has been made unconsciously, the negative may be saved by variation in the time of development and subsequent reduction or intensification as the case may be. Again, the careful worker will sometimes deliberately overexpose a landscape in which the contrasts are excessive, and by the same token underexpose to meet opposite conditions. To achieve a pictorial result, he will underdevelop in the first case and overdevelop in the second. All this is impossible in the tank-system.

How, then, can an amateur who has been off on a vacation, taking all sorts of pictures in all sorts of light and under all sorts of weather-conditions, develop a dozen slippery films with the same ease, certainty and care that plates are capable of?

It will not do to handle the wet films. They may slip out of the hands and fall to the floor, with results disastrous to pictorial effects. Nor, on the other hand, will it do to stick the fingernails into the emulsion in the hope to get a firmer hold. The films, too, have a reprehensible habit of sliding about the tray into places photographically undesirable. They seem to be gregarious by nature and are fond of bunching up in one corner, and it is a trick worthy of Keller in his best days to pick up a film, place it and make it stay in any particular place in the tray, or to take it out of the tray before the rest, without injury to the surface.

The remedy, however, is extremely simple — one of those very obvious things that occur to us only after trying to do without it for a long time.

Go to the stationer's and buy a dozen of those small clips that are used in offices for holding papers together, preferably those with small teeth. They cost only a few cents apiece. Use the tabs of the film-pack for a memorandum of every exposure made. In the darkroom have a tray large enough to hold six films conveniently. As you unload the pack, insert each film in the jaws of a clip and arrange the films in



"At the close of the day,
When the hamlet is still."

MARY CARNELL

a certain order so that you can identify each film from your memorandum. Lay the films, each with its accompanying clip, in the tray in a regular order and pour on the developer. The weight of the clip will keep the film in one place and allow you to handle the films as you like without touching them with the hand. Consulting your memorandum, you can proceed intelligently, varying the time of development to suit conditions or effects desired. But the point to bear in mind is that the films are to be handled by means of the clips and never by the hand. Thus used, they are perhaps more easily handled than plates.

The films are developed, and the next thing is to fix them in hypo, and not let them bunch up together or injure their delicate surfaces by striking any other rough surface.

The remedy in this case is simple. Get a piece of stout wire—telegraph wire, for example. Run this wire through the little holes in the top of the clips and let the film on its clip hang in a hypo-bath, each clip being far enough from its fellow to prevent touching.

A convenient way to wash pack-films is to half-fill a bath-tub with water and lay the ends of the wire with its clips, described above, on blocks of wood, letting the whole thing float in the tub.

When sufficiently washed, the films, still on the wire as above, after swabbing with a dab of cotton, may be suspended by means of strings attached to a corner of the room by thumb-tacks or push-pins.

When bone dry, the films may be removed from the clips and will be found to be perfect



DAY-DREAMS

KATHERINE BINGHAM

except where the jaws of the clip have impinged—a space about equal to the rebate. There should be no scratches, no finger-marks, no nail-marks, if directions are followed as given above. Any effect that can be accomplished on a plate can be accomplished on a pack-film thus handled.

The same process might be applied to roll-films except for the fact that roll-films *will curl* in development (*pace* all advertisements to the contrary notwithstanding) and cutting up a roll-film in the darkroom occasionally lends itself to disappointments and oburgations.

[It should be emphasized that the foregoing criticism of tank-development applies only when it is desired to vary normal results for purposes of pictorial effect, or when incorrect exposures are to be made the most of. Exposure is the

secret of straight photography, and with correct exposure normal development will take care of itself. In the tank it matters not whether an exposure be one second or one minute. So long as each be correct, they will both develop in the same solution in the same length of time. The ways of pictorial photography, however, are many and devious, and, as Mr. Morse states, mechanical methods are not conducive to individuality of treatment. — *Ed.*]

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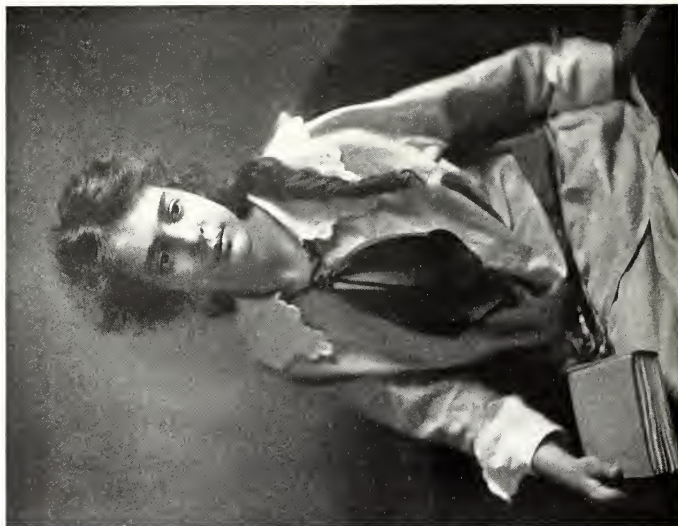
ART is a grasped generalization of the truths of nature, freed of all coarse, crude and degrading accidents and details. The consummate artist, observing the principles of law, does everything easily: while the empiric, striving at facts, does everything laboriously. — *Alger.*



HEAD OF A MAN

CLARA ESTELLA SIPPRELL

WOMEN'S FEDERATION OF THE P. A. OF A.



ANNIE

MAY L. SMITH

The Flashlight-Season

TO most photographers flashlight-photography is a bugbear. Some shirk it altogether; some place the work with a specialist; others do the best they can without proper knowledge, and a few understand the principles involved and make a success nearly every time. The unfortunate fact is that little or no care or forethought is exercised in preparing for this special and really difficult class of work. An order is booked, and an hour or two before starting, the flashlamp is dug out of the corner. Possibly a new tin of flashpowder of a different brand from that used last time is procured, or it may be decided to chance it with the remains of last year's supply, and the operator sets out with the feeling that he will be very glad when the job is done. To the habitually-careful worker this picture may seem to be overdrawn; but it is true to nature in most cases, particularly at this time of year when the demand for flashlights of dinners and meetings begins. Flashlight-photography is feverish work at its best, and the apparatus and materials used should be as perfect as can be procured. Nor is that all that is necessary; the photographer must thoroughly master the method of using them, and this can be done only by careful practice and rehearsal under what may be considered average conditions. Most operators have very vague ideas as to the quantity of powder necessary for a large group or interior, and are just as likely to use too much as too little, while the position of the lamp is rarely quite correct, often giving flatness in the faces and a dazzled appearance to the eyes. It is a good plan to do a little speculative work, say, in a local gymnasium or even in the interior of a large workshop, to get things into good running order. If the first attempts give good results they cover expenses; if not, there has been an opportunity to find out weak points without the loss of reputation and a good order.

The principal points which have to be considered are, firstly, the maximum aperture of lens at which sufficient depth can be obtained; secondly, the position of the lamp, particularly as regards height; and, thirdly, the quantity of powder necessary properly to illuminate the most distant figures in the group, the distance between the lamp and such figures being an important factor. Regarding the first of these it may be pointed out that with modern flat-field lenses, which define sharply right across the plate at full aperture, a much larger stop may be used than is possible with a rectilinear.

As it is usually necessary to have the camera in a somewhat elevated position, depth can be obtained by the use of the swing-back and, as the lens is pointed downwards, the same swinging which does this corrects the diverging perpendiculars. The next point, viz., the placing of the lamp, is all important. The lamp is frequently placed too low and too nearly over the lens. It should be at least ten feet from the floor for a large group and well to one side of the camera. Even then some of the faces will receive a full front-light, but the center ones and those on the distant side should have decent modeling. Great care, of course, must be taken to prevent any direct rays from the flash reaching the lens. It must be remembered that when using a flashlamp we are dealing with a near source of light, and that therefore the falling-off in illuminating-power is very rapid. If the nearest point in the picture is twenty feet from the camera and the most distant forty feet, the latter is receiving only about one-fourth the exposure of the former. This may be overcome to a certain extent by fixing a mirror behind the flash so as to reflect a beam of light which misses the nearer figures and strikes the group about halfway between the front and back planes. The third point—amount of powder—can be settled only by experiment; but in the case of large work the operator must learn to think in ounces instead of the grains or drams which would suffice for single figures. It is impossible to be too cautious in the handling of explosive flash-mixtures, and it is a wise precaution to put up only enough for one exposure in each box or bottle. Some serious accidents have occurred through sparks reaching a tin containing a pound or so of powder. A closed lamp must never be used with explosive compounds, such instruments being intended for pure magnesium only. Flashpowders must always be burned upon an open tray.

A branch of flashlight-work which has not received the attention it deserves is the taking of single portraits and small groups in private houses. With a properly-screened lamp perfectly good pictures, with no suggestion of artificial lighting, may be obtained. Here, again, we must remember to keep the lamp high enough. If the light be five feet away from the head of the sitter it should also be five feet above it and as much to one side as may be necessary to give the desired lighting.

British Journal of Photography.



A WINTER LANDSCAPE

B. Y. M. C. U. CAMERA CLUB

F. W. HILL



"THE BREAKING WAVES DASH HIGH"

F. W. HILL

B. Y. M. C. U. CAMERA CLUB

B. Y. M. C. U. Camera Club

F. W. HILL

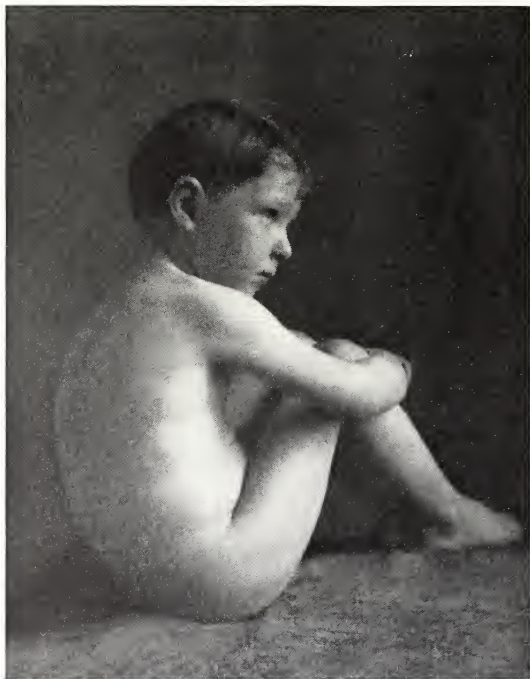
IN the fall of 1907 eighteen members of the Boston Young Men's Christian Union, who were interested in photography, got together and petitioned the president and director of the Union to allow them to form a camera club within the Union, and to set aside and furnish rooms for their use. This the Union agreed to do, and appropriated \$325.00 to furnish the rooms, on condition that the camera-users furnish an equal amount.

Under these conditions the Union Camera Club was organized in April, 1908, with eighteen charter members. Stephen E. Woodbury was elected president, and the Club started to raise funds for its share in furnishing the rooms. This was accomplished so that the rooms were formally dedicated on July 13,

1909, and a real camera club came into existence.

The rooms are situated on the third floor of the Union Building, 48 Boylston Street, Boston, and are well adapted to the needs of the Club. They consist of a large assembly-room, three darkrooms, two printing-rooms, enlarging-room and work-room, and are fully equipped with all necessary apparatus. Individual lockers are also provided for each member.

In 1910 President Woodbury, having served two terms, followed our national example (T. R. excepted) and declined a third. As no other member seemed inclined to accept the position, the Club was in a somewhat unorganized state throughout the summer of 1910. In September, Mr. F. W. Hill, a comparatively new member,



STUDY

M. L. VINCENT

was finally elected for the remainder of the year, and began to revive the Club by making a social center of it for the members, as well as a photographic work-shop. This proved so successful that, when President Hill completed his second term in 1912, the membership had increased to over forty members, and the monthly meetings were attended by from fifty to seventy-five per cent of the members.

In 1912 Dr. Harvey D. Hutchins was elected president, and has continued the good work, so that the membership has now increased to over fifty active members. In the meantime, the equipment of the Club has been steadily increased. There is now a complete 8 x 10 studio-outfit, with artificial light, so that members can make portraits day or night. There is also an excellent projecting-lantern with

a 2,000 candlepower arc-light for the lantern-slide enthusiasts. The work of the members has also risen steadily, until now their Annual Exhibition is one of the photographic events in Boston, and exhibits by club-members will be found in all the leading salons and exhibitions in the country. In closing, just a few words as to the advantage of belonging to a camera club seem to be order. First, we have the advice and experience of our fellow-members. But greatest of all to the real enthusiast is the spirit of competition — always trying to do something better than the other fellow. One member exhibits a fine picture — we want to make one a little better. And so it goes, ever improving and trying to do the best we can. The result cannot but be beneficial. Personally, I have used a camera for over twenty years; but I



"WHO ARE YOU?"

DR. H. D. HUTCHINS

B. Y. M. C. U. CAMERA CLUB

have learned more about making real pictures in the four years that I have belonged to the Club than in the other sixteen. Moral: If you do not belong to a camera club, join one.

Hunting with a Camera

WHEN you hunt with a gun you incur big dangers, not only for yourself, but for other people. "To shoot a bird is to lose it," said

Henry Thoreau. A dead bird is not a bird at all. It is only the remnant or mutilated remains of what was once a living thing.

To take a picture of a bird and preserve the picture is a great achievement for a child or a grown-up, and when we can change the shooting habit into a camera habit, we have made an immense stride to the front. The camera-habit endears us to life, preserves sanity, and makes for health and happiness.—*Elbert Hubbard.*



A KISS IN HONOR, NO ONE CAN DENY

KÄTE HECHT

My Animals and My Camera

KÄTE HECHT

FROM early childhood I have always loved animals; without horses, dogs, tame birds and fearless deer we should find life "tedious and time-robbing," as Schopenhauer says. It was natural, therefore, that when I took up photography I should seek my photographic subjects among the animals, and through the animals I learned to love my camera, which I took up at first only as a pastime. Yes, I learned to love and to appreciate it, for it permitted me to secure in pictures many little episodes which I had discovered and observed out in the garden and in the forest. When photographed, my animals seemed to be tangible before my eyes—they were no longer mere souvenir-photographs, which I must awaken to life; they live before my very eyes with all their intimate charm, just as in the early morning or late evening when I had stealthily heard and watched them. And even to-day, after thirteen years have passed since my first snapshots were made, even to-day the animals are to me the only worthy subjects for my camera. Since childhood they have remained my personal

friends, with whom I have lived on a friendly footing, and later becoming the subjects of my study and observation—a mental process which affords a deep insight into the soul of the animal and often arouses astonishing admiration of the thousand indications of instinct and intelligence and of personal individuality. It is this individuality of each detail which manifests itself in my "sittings," *i.e.*, in those tests of patience which are frequently necessary to the development of my pictures. For I am not indebted to chance alone for charming genre-pictures, but principally to the infinite patience with which one leads back these animals, again and again, to the same spot in order to fix to the plate the pictures which have been conceived in the mind. Many days—and of these, many hours—are needed in order to reach the goal. And yet, one must not tire the animal, lest, through an impatient word or gesture, one undo the work of many days; nor yet, through lack of preparedness, permit to go by unutilized the last moments in which expression and movement harmonize, as, for instance,



AN AMPHIBIOUS TRIO

KÄTE HECHT

in the picture. "Ein Wichtiges Gespräch." As I have already mentioned, all animals are not equally well suited to my purpose. This one is animated and responsive; that one is stupid or indifferent to the most emphatic admonitions or arguments. Such troublesome sitters are replaced by substitutes. Out of four crows, only two proved to be wholly camera-worthy. The other two, by sheer stubbornness and disagreeable behavior, always upset my best-laid plans. Ordinarily, crows are particularly grateful subjects for the camera in that, through intelligent and animated behavior, drollness and impudence of manner provide most comical situations. "A Kiss in Honor, No One Can Deny," is the title I have given to a laughable pose in which the crow daintily and gravely bestows a kiss upon the pup's cold nose. It was this same crow which, with starting eyes and open beak, gazed horror-struck upon a toad seen for the first time. As

glass, is an advantage which no other camera, however handy and light, possesses. Equally indispensable are the relatively great focal lengths of 18 and 25 cm. (about 7 and 10 inches) in connection with my plate-sizes, 9 x 12 and 12 x 16½ cm. (3½ x 4¾ and 4¾ x 6½ inches), in order to obtain a pictorial size of the object to be secured upon the plate—in

I have already said, the other crows gave no expression to their sensations on such encounters.

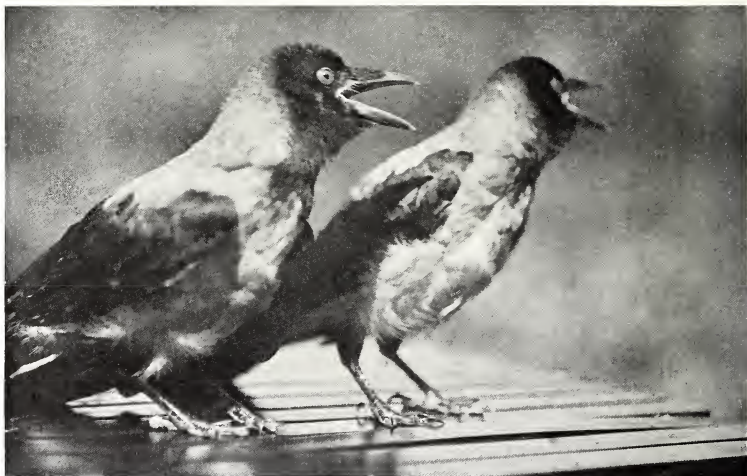
Usually grateful subjects are nice, and in every pose they are dainty and graceful, and on account of their lively motions offer fresh material for new pictures. I am indebted to them for suggesting several of my most successful genre-pictures.

And now a few words regarding my technical equipment. I do my photographic work exclusively with mirror reflex-cameras. To see the picture up to the last moment before exposure upon the ground-



EIN WICHTIGES GESPRÄCH

KÄTE HECHT



YOUNG CROWS

KÄTE HECHT

spite of the great difficulty in focusing during the constantly changing positions of the animals. My relative apertures of $F/6.8$, and $F/5.5$ are not always adequate during unfavorable light-conditions. $F/4.5$, with its greatest speed, would surely have prevented the loss of many a valuable picture. I prefer exclusively slow and soft-working developers, such as katechin and glycine. The delicate delineation of fur, skin and plumage—often the characteristic feature of the entire picture—should never be lost. That highly-sensitive plate-material is an essential condition, need not be particularly mentioned. But all good optical equipments, all excellent technical expedients, do not conjure a picture upon the plate, although what they produce is, in the best sense of the word, a pictorial effect.

The basic requirement for work like mine is the love of animals and an intelligent and sympathetic feeling for the creature's soul and a self-absorption in the manifold character of each particular feature. This will enable one to approach the task controlled by a single idea and equipped with the necessary degree of patience. Even when many blanks are drawn in the lottery of fortune, there are many prizes which enlarge and deepen the pleasure to create. As Mephistopheles says in Goethe's "Faust," "The effort is small, the sport is great."

Reducing Contrast by Toning

A NEGATIVE made some time ago of a rather difficult subject proved on development to be of such intolerable harshness as to be quite useless; the shadow-masses being practically clear glass, the writer thought it hopeless to apply any after-treatment. While blue-toning some bromide prints the idea presented itself that this process applied to negatives would render the highlights much more pervious to the actinic rays, and so the negative was toned to a brilliant blue, when it yielded a print of delightful quality.

Any of the formulae for the blue-toning of bromide prints may be used, and will be found to alter to a remarkable degree the printing-quality of a negative which is of a robust nature, and the prints appear to suggest color-values more faithfully, and to convey a better sensation of atmosphere. The silver deposit becomes more actinic by degrees, and the action may be stopped at any time, half an hour's washing completing the operation. If, after a print has been taken, still further reduction of contrast is desired, the toning can be resumed; only in cases of extreme harshness will it have to be carried to the stage of brilliant blue. Printing should be done on a development paper, not on P. O. P.—*David Ireland in The Amateur Photographer.*



A STOLEN MEAL
ASTONISHMENT
KÄTE HECHT



EDITORIAL

Exemplary Advertising-Methods

THE art of advertising as a means to obtain patronage, whether it be in the mercantile field or in professional activity, has been practised since the beginning of civilization. Advertising or publicity exists in various forms, and the effectiveness of an advertisement depends on the ingenuity or resourcefulness of its originator. Photographic advertising has usually consisted only of the conventional showcase placed at the street-entrance of the studio, and, although it is still regarded as the most potent means to procure business, the enterprising photographer also employs other methods, such as advertising in newspapers and street-cars. But, as has already been stated in these pages, whatever form or method suits one photographer may prove unproductive to another. The class of people to be reached, the style of work of the studio, or the funds available for the purpose usually determine the method of advertising. When the photographer desires to acquaint a cultivated class of persons with the superior quality of his work by means of a printed folder, he cannot hope to create a favorable impression unless the communication itself is executed in good taste. If the design and workmanship are not artistic, the effort to interest the recipient in the work of this particular studio will prove unavailing.

Although this kind of publicity-work used by a number of high-class studios in America is irreproachable in appearance, the latest expedient adopted by the Dührkoops, of Berlin, represents, perhaps, the best that has yet been achieved in photographic advertising. It is just a "portrait-almanach," for the year 1914, in the form of a brochure, five by nine inches and printed on India-tint, dull-finish coated paper. The front-cover is an extremely simple but effective design, including a halftone reproduction of a typical Dührkoop portrait — the profile of a handsome woman. The contents, composed of thirty-two pages, has been arranged with discriminating judgment. On the title-page, at the top, appears only the designation, *Dührkoop-Bildnisse* (Dührkoop-Portraits). The next corresponding page is devoted to a list of honors won by the Dührkoops, which include about fifty decorations and medals bestowed by royalty, universities, expositions and so-

cieties. The next two pages are given up to a statement regarding the character and variety of the work done by the firm. Then follows the "almanach" proper, one month occupying two pages facing each other, the upper half of each being occupied by a characteristic Dührkoop portrait taken either in the studio or in the open, and printed in warm-black ink. The concluding two pages contain a scale of prices, according to which, for instance, fifty Marks (\$12.00) is charged for one sitting and two completed prints, size of print about eight by ten inches; each additional print, \$3.60. Conditions and suggestions with reference to satisfactory service conclude this section of an exemplary and useful publication. The advertising-value of so attractive and useful an expedient must be apparent to every photographer of business-ability. The idea should be adopted not only by makers of portraits, but by other specialists in the photographic field. The keynote of all advertising should be simplicity, directness and good taste. In developing an idea, the advertiser can often obtain valuable aid from an amateur pictorialist, unless he prefers to consult a professional painter.

Abbreviated Business-Terms

SOME of our friends, who include in their reading German photographic publications, have requested us to explain the meaning of the letters, "G. M. B. H.," which appear after the names of certain German business-firms. They are an abbreviation of the term, *Geschäft Mit Beschränkter Haft* or, in English, "business of limited liability," which is usually shortened to "limited," as used by English and American business-firms.

The four letters, "D. R. G. M.," as used in connection with advertisements of manufactured articles, which appear in German papers, are an abbreviation of *Deutsches Reichs Gebrauchs Muster* (German Imperial Utility Sample). This is different from, "Deutsches Reichs Patent," inasmuch as the former is simply a protection from imitation, which does not offer as much protection as a patent, and its life is only about two or three years. This protection is obtained much more easily on any device than a patent, and is often employed in preference to a patent, unless the device should be one of considerable importance.

PHOTO-ERA MONTHLY COMPETITION

For Advanced Photographers

Closing the last day of every month. Address all prints to PHOTO-ERA, Monthly Competition,
383 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. If preferred, the winner of a first prize may have a solid silver cup, of original and artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request. Enclose return-postage in this letter.

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of *stiff* corrugated board, not the flexible kind, or with thin wood-vener. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value. Persons interested to have one of these PHOTO-ERA prize collections shown in their home-city will please communicate with the Editor of PHOTO-ERA.

Awards — Christmas Cards

First Prize: Mrs. C. B. Fletcher.

Second Prize: Erwin Marty.

Third Prize: Anson M. Titus.

Honorable Mention: H. W. Mansfield, Alexander Murray.

Subjects for Competition

"Still Life." Closes February 28.

"Foreign Travel." Closes March 31.

"Flashlights." Closes April 30.

"Growing Flowers." Closes May 31.

"Telephoto-Work." Closes June 30.

"Landscapes." Closes July 31.

"Outdoor-Portraits." Closes August 31.

"Waterscapes." Closes September 30.

"Indoor-Portraits." Closes October 31.

"Decorative Applications." Closes November 30.

"My Home." Closes December 31.

"Winter-Scenes." Closes January 31.

"General." Closes February 28.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the publisher will give them the choice of photographic supplies to the full amount of the prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

To Our Friends

JUST as you have consciously or unconsciously been benefited by participation in these monthly competitions, so your friends would also be spurred on to do better work and would be broadened in their appreciation of that which is best in photography — pictorial art. Tell them about these competitions, of the pleasure of rubbing elbows, so to speak, with their fellows, and of the satisfaction of winning a valuable prize strictly on the basis of relative merit. May we count upon you to "pass the word along"?

THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and all regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston.

Flashlights

Flashlight-Competition Closes April 30

ONCE more, as we "sing a song of seasons," we come to the month of slush and bluster, when, however great the charm of the translucent, water-soaked snow and the reflections on the ice and the spreading puddles of water, it takes a deal of enthusiasm, not to say heroism, to brave the sharp wind and the discomfort of soaked feet and bedraggled garments and fare afield to bring in the coveted portraits of Mother Nature in the month of March.

But the days are growing longer, the sun is mounting higher in the sky, and we can mitigate the tedium of waiting by doing interesting things with "bottled sunshine" indoors.

The manufacturers of photographic appliances have placed at our disposal all manner of up-to-date material in the way of "portable skylights," flash-sheets, cartridges of various sizes, non-explosive "ribbon" and flash-lamps of several different types, until surely every one should be able to find something to meet the exigencies of his particular surroundings.

Each variety has its strong adherents, who seem to feel that theirs is the one and only safe and satisfactory method to make pictures by means of the flashlight. The truth seems to be that any one of the many processes will give good results if properly used, the chief requisite being intelligence in the "man behind the gun." Whatever sort of appliance is chosen, the best way is to stick to that until its technique has been mastered and, if results are unsatisfactory, that the trouble is surely in the methods, not in the operator.

Of the most recent things put on the market for this purpose may be mentioned a "portable skylight," such as the Victor Studio Flash Cabinet. This is admirably adapted to the making of flashlight-portraits, and for this class of work it would be difficult to find anything better.

In home-portraiture by daylight, it is often impossible to take the subject in the best setting because the illumination is either inadequate or comes from the wrong direction. Difficulties of this sort do not disturb the worker with the flashlight. He can select any background he desires, and when he has his arrangement and has his sitter posed satisfactorily, he is free to place his light where it will give the best results. Care, however, must be taken to keep the light from striking the lens, and, if, to obtain the desired effect, the flash has to be so located that there is a possibility of its doing this, a lens-hood should be improvised to ensure immunity.

A simple but effective hood may be made from the dead-black paper that comes around dryplates or gas-light papers. Simply shape a piece like a funnel and fasten the small end about the lens with a rubber band. Be sure that the hood flares enough to prevent its cut-

ting off any of the view. If the light is pretty well to the side, a screen may sometimes be used to shield the lens from the direct light, obviating the necessity of a hood.

The "portable skylight" is so constructed that it can be placed well above the sitter and fairly near, so requiring less powder for the same exposure. If, however, one has some mechanical skill and does not care to go to the expense of the patented article, a very good substitute may be made. Mr. C. M. Whitney describes such a contrivance in the *American Annual* for 1904.

For this he takes the bottom of an ordinary music-rack, substituting for the rack itself, a 7-foot $\frac{1}{4}$ -inch iron rod. So arranged as to slide up and down on this rod is a smaller rod or heavy wire projecting some two feet on each side and having a hook on either end. From one end of this horizontal rod is hung a piece of white sheeting one yard square, fastened at the top to a three-foot rod. This acts as a reflector, while a double thickness of cheese-cloth, similarly arranged at the opposite end of the rod, serves to diffuse the light. A piece of sheet-iron about eight inches square is fastened to the upright rod in such a manner as to allow the height to be adjusted, and on this the flash is arranged. Mr. Whitney very wisely suggests the advisability of dampening the screen and reflector before using, so lessening the danger from sparks.

Where children or animals are the subjects to be taken, it is almost necessary to use an instantaneous flash; but if the subject is one allowing a longer exposure, an interior for instance, the Crown or Prosech hand flash-lamp are very satisfactory tools. They require the pure magnesium powder, which is non-explosive and gives a very strong light. The magnesium is ignited by blowing the magnesium powder through the flame of an alcohol lamp and any length exposure may be given. By attaching a long tube to the lamp it may be placed in the fireplace and used for very picturesque fire-light studies. The Nichols is a similar type of lamp for portraiture. It stands on a tripod and has an umbrella for reflection or diffusion.

Magnesium is also put on the market in the form of a "ribbon" and in that form is very simple to use. A given number of inches will always give the same exposure and for a short piece no apparatus is needed. A pair of pliers may be used to hold the ribbon and prevent burned fingers. If a long strip is needed, however, this method is hardly adequate and Mr. Zerbe, in the *American Annual* for 1912, describes a very ingenious "linter" for this purpose:

Take a round tin can like one in which platinum paper is marketed. Cut two slits, one on each side of the seam, leaving about one-half inch at the top and bottom uncut. From the ends of these slits cut others running a little more than half-way round the can and bend back, at right angles, the flaps so formed. Cut



MADRONA-BERRIES

MRS. C. B. FLETCHER

FIRST PRIZE — CHRISTMAS-CARDS

out the "seam" of the can and bend it into the shape of a handle, insert the ends in slits cut in the back of the can and bend them down on the inside. To the center of the cover fasten a spring-clip by passing a wire through holes in the top and twisting together the ends. To use

the ribbon, wind it into a spiral by twisting it around a small pencil and suspend it from the clip. There is less danger from this ribbon than from any other form of flash, its greatest fault being its comparative slowness. For interiors, or for lighting up dark corners during a prolonged daylight-exposure, it is ideal, giving comparatively little smoke and dust.

Flash-sheets are somewhat similar to magnesium ribbon, coming in small sheets by the dozen like printing-paper. For occasional use in the home where large flashes are not necessary, Eastman Flash-Sheets are admirably convenient and efficient. They are not instantaneous, requiring about one second to consume, and so are especially well suited to the making of interiors and portraits; even groups and genre-studies may be made if a little care is exercised. One or more sheets may be pinned to a large cardboard and lighted with the flame of a wax taper, or one of the convenient Flash-Sheet Holders may be used.

For more pretentious all-around work some sort of lamp is indicated, the limitation of the old type of "blow-through" lamp using pure magnesium being that it is not quick enough for large parties, banquets and groups, particularly children, where there is likely to be movement and consequent blur with a slow flash. The solution of this seeming difficulty lies in the employment of a special type of lamp intended for use with explosive powders, such as those used for many years in small flash-cartridges like the Eastman, Actino and Luxo. Such powders as Agfa Blitzlicht, Victor, Ancelo, Prosch Sunlite, Nichols and Luxo are referred to. Several of these lamps are intended to hold in the hand, whereas others stand on a tripod and often have diffusing- or reflecting-screens, or both; often, too, a smoke-bag also serves all three purposes. For \$3.50 to \$5.00, according to size, a Prosch Hand Flash-Bag may be had to use in conjunction with any hand or stand flash-lamp that one may already happen to have. Going a step further, flash-lamps may again be divided into two classes, according as they are fired mechanically or electrically.

Of the hand-lamps mechanically fired may be mentioned Smith's Automatic Dependable, the Ingento Flash-Pan, the Caywood with its cartridges of assorted sizes obviating the weighing of powder, the Agfa, the Spreadlite and the Nichols. A trigger fires a paper cap or parlor match in all except the Agfa, which is ignited by a small revolving wheel of sparking metal. Of similar construction, except for a tripod support, are the Lieber and the Eagle, with a pneumatic bulb to fire a percussion cap, the latter being equipped with an umbrella screen for reflecting or diffusing as desired. A smoke-bag may be had with the Eagle lamp at a slightly increased price. The Nichols also has an umbrella screen and is fired by a pneumatic bulb, which blows a small alcoholic flame through a blast-tube where it ignites the powder.

For large and serious work electrical tripod-lamps are safe and reliable, quantities of essential importance to the professional artist. They have the advantage that any number of them may be distributed about a large hall, electrically connected and fired simultaneously by



CHRISTMAS-MORN

ERWIN MARTY

one push-button. The Helios and Prosch Blitzlite are good examples, the former being particularly notable for its squibs or cartridges and a safety device for testing connections before firing. The Prosch burns either loose powder or an envelope cartridge. An efficient but smaller and much less expensive lamp will be found in the Ingento.

Having decided how the flash is to be produced, other important points may be considered. For firelight-effects, or anything where the source of light is included in the picture, a double-coated plate gives better results because of less likelihood of halation. Films are also good and seldom give trouble. In artificial light-effects one does not desire too much detail in the shadows; but the eye sees some gradations of tone and so many photographs represent the shadows as one solid mass of dead blackness. The use of a reflector is a great help to obviate this; but it must not be brought too near, other-

wise it may give an effect of cross-lighting very disastrous to the pictorial quality for which we are striving. If we are working by daylight, enough outside light may be admitted to do away with the Stygian blackness of the foreground; but an overdose would spoil our effect entirely.

In the evening we must depend on reflectors, for what artificial light there may be will have virtually no effect on the plate during the short exposure. It is a mistake, however, to turn off the lights, as the sudden bright light following the darkness is sure to give a staring expression, because of the dilated pupil of the eye. It is hardly wise to have the sitter look directly at the flash, as the brilliancy of the light is almost blinding and, especially with children, might possibly be injurious to the eyes. Too much care cannot be taken that nothing of an inflammable nature shall be near the flash and that the operator's hands be protected.

PHOTO-ERA for February, 1913, has an interesting article by E. C. Johnston, telling how he made his camera and flashlight help to pay his way through college. The same number has also a helpful article by David Bevan on "Flashlights in the Home."

Choose for your subject something of interest in itself, and then use all your knowledge and skill in pose and lighting and show us the results.

Intensifying Thin Negatives

WHEN the result of overexposure or underdevelopment, immerse the fixed and slightly-rinsed negative in the following until dense enough, then wash:

Water	10 ounces
Sodium sulphide, anhydrous	2 ounces
Mercuric iodide	45 grains

Keep this solution in the dark, as the light discolors it. A negative so treated may turn yellow in time unless, after intensifying, the negative is placed for a few minutes in a metol or metol-hydroquinone developer.

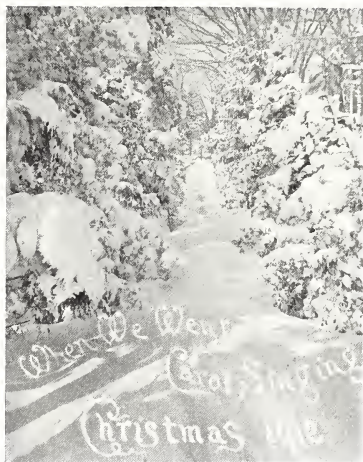


A WISE MAN FROM THE EAST

CHRISTMAS
GREETINGS

A M T

A WISE MAN FROM THE EAST ANSON M. TITUS
THIRD PRIZE — CHRISTMAS-CARDS



WHEN WE WENT CAROL SINGING A. MURRAY
HONORABLE MENTION — CHRISTMAS-CARDS

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.

A. N. — For all-around purposes an **acetylene generator** and burner will prove best when electric current is not to be had. The light may be used with condensing-lenses for enlarging, or with simple paper or cloth screens for portrait-lighting. For ordinary printing such a light is unexcelled.

A comprehensive and inexpensive book on studio construction is No. 50 of the Photo-Miniature Series.

H. W. I. — **To photograph cut-glass dishes or metallic objects with polished surfaces**, rub a ball of soft putty over the article and photograph against a black ground with the light falling from one direction and all reflections stopped with black screens. A dodge often made use of is to fill cut-glass dishes with ink or black aniline dye. Bright metal parts may be painted to dull reflections with a thin cream composed of white lead and turpentine, grayed with lamp-black and one-sixth part of gold-size. Turpentine or benzine on cotton waste will remove this paint after the photograph has been made.

N. O. R. — **The color of a negative affects its printing-time.** Negatives of a brownish-black color should be less intense than those of a grayish-black to give the same printing-quality, and the warmer the color, the longer the printing-time.



AN AUTUMN LANDSCAPE

WALTER L. BROWN

FIRST PRIZE — BEGINNERS' CONTEST

P. G. R. — A **fixing-bath formula with citric acid** instead of acetic is as follows:

Water	16 ounces
Hypo	4 ounces
Sodium sulphite, anhydrous	1½ ounce

When fully dissolved add the following hardener:

Powdered alum	1½ ounce
Citric acid	1½ ounce

A favorite **all-around developer** for plates, lantern-slides, bromide and gaslight papers is as follows:

A	
Water	16 ounces
Metol	4 grains
Sodium sulphite, anhydrous	40 grains
Sodium phosphate	8 grains
Hydroquinone	7 grains
Hypo solution, 10 per cent	4 minims

B	
Water	20 ounces
Potassium carbonate	2 ounces

For use, take equal parts of A and B.

In the case of **double-coated plates**, the image does not come down to the glass upon development so that it may be seen on the back of the plate. For this reason, factorial and tank-development are virtually necessary. If correct exposure bothers you, factorial development may be the preferable method for a while. Anyway, it may be used as a test of tank-development, for it is next to impossible to tell exactly how a correctly developed

double-coated plate should look; that is, how much its surface will have been darkened, and to what extent the image will seem veiled upon looking through it.

If you use the tank-developer advocated for Orthonon plates for the time and at the temperature suggested, you should have no trouble in obtaining good negatives, provided the exposures are approximately correct. If you do have trouble, however, the best course is to adopt factorial development for a while and examine the correctly-timed negatives very carefully; it will soon give you a splendid idea of the appearance of correctly-developed negatives.

The pyro formula is best for the test. It follows:

A	
Water	16 ounces
Oxalic acid	10 grains
Pyro	1 ounce

B	
Water	16 ounces
Sodium sulphite, anhydrous	2 ounces

C	
Water	16 ounces
Sodium carbonate, anhydrous	1 ounce

For Orthonon plates, take 1 ounce of each and 15 ounces of water. The factor is 15. Count in seconds the time from immersion until the highlights appear, and multiply by 15, which will give the time of complete development.

For the tank, take 1 ounce of A and C, 1½ ounces of B and make up to 64 ounces with water. Time of development at 65 degrees, 30 minutes.



"DADDY SAYS IT BURNS!"

ROLAND B. HALL

Print-Criticism

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.

N. L. — If you will make use of the data-blanks provided and send data with your prints, it will be much easier to supply constructive criticism.

The photograph of a snow-covered mountain-range suggests over-correction with too deep a color-filter. This leaden look is not true to nature and is not pleasing to the eye.

All of the other three prints are underexposed. That seems to be one of your faults. The roadway, with its downhill perspective and man walking, is an attractive

subject well composed, but the effect of sunlight would be much more realistic if the shadows possessed the detail of longer exposure. "Swiftwater Creek" would seem less like frozen ice and the distant forest much less solid black had more time been given. In other words, if you actually stop the motion of water with a shutter, there is no sense of motion in the photograph; on the other hand, if the exposure is too long, the result is too streaky. The other roadway is a good composition, but it also needs more detail in the fir-trees. Had the fence-post so prominent at the left been excluded by advancing the camera a foot or so along the road, a marked improvement would have resulted.

M. J. B. — "The Song of the Robin" is nice in sentiment and good in technique; also the figures are well placed, though perhaps they might well have been nearer to convey something of the facial expression. The background-trees are so graceful that it seems a pity that the prominent trunk at the right is so uncompromisingly straight. Such long straight lines are usually ugly in nature, and a foreground-tree should be as picturesque as possible. Print on a buff matt-surface paper, either gaslight or platinum, and tone to sepia.



SHEEP GRAZING

MARSHALL FOWLER

THIRD PRIZE — BEGINNERS' CONTEST

W. C. C. — Your two prints are very good technically. "The Quiet Stream" could hardly be better, and in composition it is excellent. Nature was not so kind to you in "Wind-Tossed Birches," however. The point of disappearance in the road, to which the eye inevitably strays, is too far to the left. It would better have been about one-third from the edge of the print. This would also have brought the tall, straight tree more into the print where the severity of its straightness would have been less noticeable. A severely vertical tree seems out of harmony with the graceful diagonals.

C. S. F. — The technical quality of your work is very good, but the subjects lack general interest, although no doubt prized by you as records. Views through doorways and windows are always of strong appeal and yours is very good. It is always desirable, however, to show an entire piazza-chair or else eliminate it altogether. The view of the landing would have been improved had a nearer viewpoint excluded the nearby pile. "Clouds" is well named, for there is nothing else in the picture except the silhouetted skyline. A little detail in these buildings would have been more nearly what the eye actually sees, would have lent greater interest and would not have detracted from the importance of the clouds to any considerable extent.

B. B. — "Where the Red-fish Abound" is attractively composed and interesting to those not often seeing an Indian encampment. The high viewpoint, however, seems to dwarf the tents and suggest a toy-outfit.

An enlarged print would help matters in this respect.

"The Road to the Lake" would have been better were the figures together and none looking backward into the camera. At present there are two centers of human interest where there should be only one.

In both of these pictures the mountain-tops are cut off. This seems a pity, for the inclusion of them would lend great interest and dignity to the compositions. The fancy mask through which you have printed "The Road to the Lake" is not to be encouraged. It is too prominent and detracts from the picture.

G. C. S. — Your portraits would appeal to us more if they seemed more spontaneous and less posed, although thousands of just

such positions are photographed by professional artists. The chief fault of "Ready for School" is the prominent pattern of the wall-paper. A plain ground is preferable, but were this wall-paper twice as far back of the little model, it would be so far beyond the focal plane as to be almost lost. The other portrait lacks texture in the white dress. Orthochromatic plates are needed for this work, and care must be taken not to over-develop. A soft-working developer is also a great help to ensure better gradation.

The flower-subject is too crowded in the space, the base of the glass not showing. Sharper definition would also improve the photograph.



WOODLAND SHADOWS

IRENE LIBBY

HONORABLE MENTION — BEGINNERS' CONTEST

THE ROUND ROBIN GUILD MONTHLY COMPETITION

For Beginners Only

Closing the last day of every month. Address all prints to PHOTO-ERA, Round Robin Guild Competition, 383 Boylston Street, Boston, U. S. A.

Restrictions

ALL Guild members are eligible in these competitions provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Anyone who has received only Honorable Mention in the PHOTO-ERA Monthly Competition for advanced workers still remains eligible in the Round Robin Guild Monthly Competition for beginners; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

Prizes

First Prize: Value \$5.00; *Second Prize:* Value \$2.50; *Third Prize:* Value \$1.50; *Honorable Mention:* Those whose work is worthy will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "**General;**" but only original prints are desired.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. All prints submitted, except prize-winners, will be returned if postage is sent in a separate letter with the data.

Rules

1. These competitions are free and open to all members of the Round Robin Guild. Membership is free to all subscribers and regular purchasers of PHOTO-ERA sending name and address for registration.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should

be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request.

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

Awards — Beginners' Contest

First Prize: Walter L. Brown.

Second Prize: Marshall Fowler.

Third Prize: Roland B. Hall, Jr.

Honorable Mention: E. Keaough, Irene Libby.

Special commendation is due the following workers for meritorious prints: T. Arai, R. L. Bush, John Cable, W. C. Canfield, Wm. H. Clark, Jr., Louis Clockman, Roscoe W. De La Mater, J. F. Fensel, R. M. Goho, W. F. Hamburg, Mark C. Housman, Gardner D. Howe, O. P. Lynum, J. George Midgley, Lewis A. Miles, Edgar K. Raudall, Ruth M. Salton, Chas. S. Schulz, J. H. Shackleton, Desmond A. Timmons, A. J. Voorhees, S. A. Weakley.



IN THE SHEEPFOLD

MARSHALL FOWLER

Exposure-Guide for March

Calculated to give Full Shadow-detail, at Sea-level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of time in table. From 8000 to 12000 feet use $\frac{1}{2}$ of exposure in table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class I plates, stop F/8 or U. S. 4. For other plates, or stops, see tables.

For other stops multiply by the number in third column

Hour	Bright Sun	Sun Shining Through Light Clouds	Diffused Light	Dull	Very Dull	F/4	U. S. 1	× 1/4
11 A.M. to 1 P.M.	1/50	1/25	1/12	1/5	1/3	F/5.6	U. S. 2	× 1/2
9-11 A.M. and 1-3 P.M.	1/40	1/20	1/10	1/5	1/2	F/6.3	U. S. 2.4	× 5/8
8-9 A.M. and 3-4 P.M.	1/30	1/15	1/8	1/3	2/3	F/7	U. S. 3	× 3/4
7-8 A.M. and 4-5 P.M.	1/20	1/10	1/5	1/2	3/4	F/11	U. S. 8	× 2
6-7 A.M. and 5-7 P.M.	1/15	1/8	1/2	3/4	1	F/16	U. S. 16	× 4
						F/22	U. S. 32	× 8
						F/32	U. S. 64	× 16

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions under which one works. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop.

* These figures must be increased up to five times if light is inclined to be yellow or red. Latitude 60° N. × 1/4; 55° × 1; 52° × 1; 30° × 1/2.

SUBJECTS. For other subjects, multiply the exposure for average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, glades and under the trees. **Wood-interiors** not open to sky. **Average indoor-portraits** in well-lighted room, light surroundings.

Example :

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an open landscape, without figures, in March 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/40 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of "Table for Other Stops," opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/40 × 4 = 1/10. Hence, exposure will be 1/10 second.

For other plates consult Table of Plate-Speeds. If a plate from Class 1/2 he used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/40 × 1/2 = 1/80. Hence, exposure will be 1/80 second.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

<i>Society or Title and Place</i>	<i>Date</i>	<i>Particulars of</i>
B. Y. M. C. U. CAMERA CLUB	March 4 to 8	F. W. Hill, 100 Boylston St., Boston, Mass. Eastman Kodak Company, Rochester, N. Y.
KODAK EXHIBITIONS		
San Antonio, Bethoven.	March 2 to 7	
Houston, Auditorium.	March 9 to 14	
Kansas City, Convention Hall.	March 17 to 21	
St. Louis, Coliseum.	March 23 to 28	
Chicago, First Infantry Armory.	March 30 to April 4	
RACINE CAMERA CLUB	Feb. 20 to March 20	O. R. Thompson, President, Racine Camera Club, Racine, Wis.
PHOTO-ERA Prize-Pictures.	1914	C. F. Richardson, President, Oregon Camera Club, Portland, Oregon.
OREGON CAMERA CLUB	February 20 to 27	A. G. Fraser, Secy.-Treas., Toronto Camera Club, Toronto, Canada.
PHOTO-ERA Prize-Pictures.	1914	John Wanamaker, Photographic Dept., Philadelphia, Pa.
TORONTO CAMERA CLUB SALON	April 27 to May 2	
	1914	
WANAMAKER ANNUAL EXHIBITION	March 2 to 31	
	1914	

Plate-Speeds for Exposure-Guide

Class-numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1 3, P. E. 156, Wy. 350, Wa.
Ilford Monarch
Lumière Sigma (Violet Label)
Marion Record

Class 1 2, P. E. 128, Wy. 250, Wa.
Barnet Super-Speed Ortho
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Seed Gilt Edge 30
Wellington 'Xtra Speedy Extreme

Class 3 4, P. E. 120, Wy. 200, Wa.
Ansco Film, N. C. and Vidil
Barnet Red Seal
Central Special
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Imperial Special Sensitive
Paget Extra Special Rapid
Paget Ortho Extra Special Rapid
Seed Color-Value
Wellington 'Xtra Speedy

Class 1, P. E. 111, Wy. 180, Wa.
American
Barnet Extra Rapid
Barnet Ortho Extra Rapid
Imperial Non-Filter
Imperial Orthochrome Special
Sensitive
Kodak N. C. Film

Kodoid
Lumière Film and Blue Label
Marion P. S.
Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso Speedy

Class 1 1/4, P. E. 90, Wy. 180, Wa.
Central Comet
Cramer Banner X
Cramer Instantaneous Iso
Cramer Isonon
Cramer Spectrum
Defender Ortho
Defender Ortho, N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 26x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.
Cramer Anchor

Lumière Ortho A
Lumière Ortho B

Class 2, P. E. 78, Wy. 120, Wa.
Cramer Medium Iso
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro C

Class 3, P. E. 64, Wy. 90, Wa.
Barnet Medium
Barnet Ortho Medium
Hammer Fast
Seed 23
Wellington Landscape
Stanley Commercial
Ilford Chromatic
Ilford Empress
Cramer Trichromatic

Class 5, P. E. 56, Wy. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho
Wellington Ortho Process

Class 8, P. E. 39, Wy. 30, Wa.
Cramer Slow Iso
Cramer Slow Iso Non-Halation
Ilford Ordinary
Cramer Contrast
Ilford Half-tone
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.
Lumière Autochrome

OUR ILLUSTRATIONS

Edited by WILFRED A. FRENCH

A PORTRAIT of a baby from the studio of a talented woman-artist honors our front cover and page 119. Nowhere in the world are so many photographs made of children, and so many poor ones, too, as in this country. Fortunately the children's portraits which enhance Miss Loehr's tribute to America's women-photographers in this issue are uniformly unspoiled by incongruous accessories. Thus, Miss Reineke's little fairy appears arrayed in sweet simplicity—nothing to mar or distract. Even the chair, although a little severe in design, is plain and sets off the little figure admirably. The workmanship is flawless and harmonious; the expression serious and thoughtful, as becomes a true portrait. Data: 11 x 14 Century Camera; Goerz Celor, $8\frac{1}{2}$ -inch focus; stop, F/5.5; Sept. 2, 1913; 11 A.M.; in studio; 8 x 10 Cramer Crown; Eastman Sepia Buff print; for reproduction, Professional Cyko.

An attractive study by the masterly Gerhard Sisters forms the frontpiece of our March issue. A shapely, well-modeled face, with warm, rich color and true tonal values is here associated with virility of design and straightforward technique. The work of these admirable artists is the result of patient, intelligent and well-directed study. This graceful arrangement, entitled "Fern," reveals a sound knowledge of the principles of art and a familiarity with the works of the great masters in portraiture. One notes with pleasure how well the picture is balanced by the mere turn of the eyes—a trick practised so successfully by Van Dyck and other great portrait-painters. We dwell at length on the remarkable talent of the Gerhard Sisters in our September number, 1913, which was embellished with the profile of a young girl, PHOTO-ERA's choice of the pictorial section of the Kansas City convention. Data: June, noon; north light; 8 x 10 Century Camera; Zeiss Tessar, 14-inch focus; full aperture; 2 seconds; direct platinum print.

That the photography of children is woman's natural domain, is generally admitted. Her ready understanding of the child's moods and caprices and her gentle, ingratiating ways of winning its confidence enable her to interpret the little one's sweet and innocent self as has not been given to the average artist of the opposite sex. So it is not strange that women, such as are referred to in Miss Loehr's admirable paper, excel in this important branch of photographic art. One needs but to gaze on the exquisitely beautiful portraits by Sara F. T. Price, Frances and Mary Allen, Katherine Jamieson and Miss Reineke. It is consummate art. Data: "Portrait of a Child," page 108; June, 11 A.M.; side windows; Eastman Studio Camera 11 x 14; Hermagis lens, 14-inch focus; full aperture; Standard Ortho; Ortol; Etching Sepia print.

"Robert," page 109; out of doors, shady side of house; $6\frac{1}{2}$ x $8\frac{1}{2}$ Rochester Camera; B. & L. Extra Rapid lens; full aperture; $\frac{1}{10}$ second; Cramer Crown; hydro-metol; rough platinum print.

Alice Boughton's group, page 111, has the merit of being interesting and unconventional. The combination of the three figures is unusual in that the seated one, being in itself well posed, is placed against the standing group also well arranged, but the ensemble suggests a disagreement, a story. Nevertheless, the picture is a portrait-group of the pyramidal form and exemplifies the artist's well-known ability.

As a symbolical representation, Virginia Prall's effort, "The Spider," page 112, is strikingly dramatic and effective, and demonstrates a fine artistic sense. Data: light, east and southwest; 8 seconds; Voigtlander & Sohn's lens; Willis & Clement's Platinotype print.

The charming group by the Goodlander Sisters, page 113, is, strictly speaking, a genre, a home-scene, and demands the rare artistic skill and refined taste for which these artists have gained an enviable reputation. Data: Home-portrait; September, forenoon; south and west light; $6\frac{1}{2}$ x $8\frac{1}{2}$ Empire State Camera; B. & L. R. lens; full aperture; 2 seconds; Artura Iris print.

Nothing that we have seen from Nancy Ford Cones' portfolio approaches in power, breadth and suggestion the engrossing scene, page 114. The composition and lighting of the group is worthy of high praise, but the spacing would be more logical if the hearth were less obscured. Data: August, 2 P.M.; good light; 8 x 10 Gundlach Camera; R. R. lens; stop, F/16; 3 seconds; Sued 26x; hydro-metol; Azo A print.

The head of a man, by Jeanette Bahlman, page 116, evinces fine qualities, and demonstrates the ability to manage the light with pleasing effect. Data: 11 x 14 rough platinum print.

Belle Johnson has widened the field of child-life, and her remarkable control over animal-pets as camera-subjects enables her to obtain combinations in her studio that defy the efforts of most photographers. She is a successful specialist by dint of long and patient work. One of her happiest achievements in this direction is presented on page 117. Data: June, 11 A.M.; north light, bright day; 8 x 10 Century Camera; Verito lens; $11\frac{1}{2}$ -inch focus; stop, F/5.6; quick bulb exposure; Cramer Crown; pyro-acetone; Artura A print.

Each of the succeeding four portraits is an excellent example of the ability of the respective artist—good, average work and highly creditable.

Mary Carnell, page 123. Data: November, 11 A.M.; north light; 8 x 10 Studio Camera; Bausch & Lomb lens; 12-inch focus; direct Azo print.

Katherine Bingham, page 123. Data: north studio light; 8 x 10 Century Studio Camera; Goerz Doppel Anastigmat; $16\frac{1}{2}$ -inch focus; 5 seconds; Sued 26x; pyro-acetone; direct American platinum print.

Clara Estella Sippell, page 124. Data: 5 x 7 Studio Camera; Vitex lens; instantaneous; plate; rodinal; platinum print.

May L. Smith, page 124. Data: light from side-window, screened, no reflector.

The work of F. W. Hill has contributed to the growing reputation of the Boston Y. M. C. U. Camera Club, of which the artist is one of the ablest and most industrious workers. The winter-landscape and the marine, pages 126 and 127, were among the best pictures of the club's annual prize-contest held last December and were mentioned in January PHOTO-ERA, 1914. Mr. Hill was awarded first prize in PHOTO-ERA's "Shore-Scenes" competition for his superb picture, "The Pearl of Orr's Island," reproduced in January, 1914. Data: "Winter-Landscape," January, S.A.M.; bright light; 4 x 5 Korona Camera; 7-inch Smith lens; stop, F/6; $\frac{1}{15}$ second; Wellington Anti-Screen plate; pyro-acetone; Wellington Bromide, $6\frac{1}{2}$ x $8\frac{1}{2}$; "Breaking Waves," August, 10 A.M.; bright sun; $6\frac{1}{2}$ -inch R. R. lens; stop,

F/6.8; $\frac{1}{25}$ second; Wellington Anti-Screen plate; pyroacetone; Wellington Bromide, $6\frac{1}{2} \times 8\frac{1}{2}$.

The inadequacy of the camera to interpret the nude human figure is well known. However, in the hands of a photographer with artistic instincts and sufficient technical ability praiseworthy results are possible, as in the case of the nude study of a boy, by M. L. Vincent, page 128. Here the flesh-values are excellent and several steps removed from objectionable literalness. The pose is graceful and well balanced. Data: Indoors; October, 10.30 A.M.; east-window; dull light; Central Non-Halation Special; Rodinal; $4\frac{1}{2} \times 5\frac{1}{2}$ Cyko Professional Platinum print.

The portrait of a Scotch collie is admirable in its truth and its breadth of treatment. Data: November, 4 P.M.; clear sky; 4×5 Reflex camera; focal-plane shutter; $\frac{1}{15}$ second; Carl Zeiss Tessar; $8\frac{1}{4}$ -inch focus; stop, F/5.6; Standard Orthocon; edinol-hydro; 8×10 Wellington Platinum Rough Bromide; amidol; enlarged from part of negative.

Käte Hecht's illustrations of her own article on the photography of animal pets, pages 130 to 133, are among the best that have ever come to our attention. Admirable examples of artistic photography, despite the numerous obstacles that must have been encountered, these fascinating pictures reveal traits in animals that one scarcely would suspect, and also serve to demonstrate the remarkable degree of ingenuity, skill and patience, as well as of artistic perception, displayed by this gifted specialist. Data are included in Miss Hecht's article.

The Photo-Era Monthly Competition

THE Christmas-card competition yielded a large number of results, many of which, however, failed to exemplify the spirit of the subject and also failed to demonstrate the many artistic possibilities it offered. The successful entries show much thought and adequate technical skill, combined with an expression of timely sentiment.

Mrs. Fletcher's experience as a prize-winner in PHOTO-ERA competitions is interesting. Having been awarded Honorable Mention a number of times—but no prize—in the advanced class this accomplished camerist tried her fortune in the Round Robin Guild Competition, where she captured second prize. (See February issue.) Then she re-entered the competition for advanced workers and captured first prize. No doubt, some one may remark, "Verily, the ways of a jury are past understanding." This may be true from the view-point of an outsider; but the entries do not always represent the highest artistic standard. The success of a print in a competition depends not only upon its own merit, but upon the number and quality of the other entries. It is obvious, therefore, that the chances of success of an entrant are likely to be better in one competition than in another, the matter of luck playing a considerable part.

Data: "Madroña Berries"; 5×7 Century Camera; R. R. lens, at full aperture; ray-filter; $\frac{1}{25}$ second; Defender Ortho; Defendol; Nako C. Soft print.

Although conventional in design, Erwin Marty's effort, page 138, exemplifies the popular Christmas-idea. On account of the violent contrast of objects generally introduced into pictures of this sort, a thoroughly artistic result cannot always be expected. It is easy enough to eliminate or to obscure conspicuous white objects, such as the large white spaces which detract from Mr. Marty's otherwise happy arrangement. Data: Christmas morning; flashlight illumination; 5×7 Empire State Camera; 7-inch Dagor; stop, F/16; Cramer Inst.

Iso; pyro tank; 5×7 print (trimmed) Professional Studio Cyko.

Sentiment, suggestion and fitness distinguish the print by A. M. Titus, page 139. The design is original and the photography creditable to our camerist's well-known skill. Data: March, 1910, in Palestine; bright; N. C. Eastman film $3\frac{1}{4} \times 4\frac{1}{4}$; B. & L. Zeiss Tessar, series 11B; $5\frac{1}{4}$ -inch focus; stop, F/8; $\frac{1}{25}$ second; pyro tank; enlargement on Wellington Bromide; copies on Cyko.

Although no snow marked the landscape at the initial Christmas season, the character of the climate must conform to the locality of the celebration of the hallowed event. Winter serene reigns in Mr. Murray's Christmas greeting, page 139. The expression of the sentiment is here well placed—in the foreground, without seriously marring the picture. Data: Christmas morning; good light; 4×5 Premo Camera; B. & L. special universal; $6\frac{1}{2}$ -inch focus; at F/16; 2 seconds; ray-filter; Cramer Iso Medium; amidol; $6\frac{1}{2} \times 8\frac{1}{2}$ P. M. C. bromide; lettering with carbon transfer-paper on glass side of negative.

The Beginners' Competition

A ROW of corn-shocks is a time-worn camera-subject; but the excuse for using it is the excellence of the result. Besides, it serves to demonstrate to the average critical mind how much better—if any—than the other fellow this camerist performed his task. Walter L. Brown has treated this popular theme with artistic discretion, and, in several respects—arrangement and breadth—has beaten the other fellow. See page 140. Data: November, 1913; 9 A.M.; bright, but hazy; 5×7 Cycle Graphic; Zeiss Protar series VIIa; used single element $16\frac{1}{2}$ -inch focus; at F/16; $\frac{1}{2}$ second; Standard Orthocon; glycin, tank; Professional Buff Cyko enlarged from part of negative; toned with Artura Hypo-Acid toning-bath; clouds printed in from separate cloud-negative.

The posing of a child—except as a portrait—without an obvious purpose, is not satisfactory, as a rule. It does not require much imagination or ingenuity to associate the child-model with a happy, suitable idea. Roland B. Hall has realized the possibility to create an attractive scene before his fireplace, in itself an object of artistic design. Page 141. The attitude of the boy is one of expectancy or curiosity, and the little story is simple, obvious and well carried out. Data: $3\frac{1}{4} \times 4\frac{1}{4}$ Film-Plate Premo; Kodak Anastigmat; at F/9; flashlight (in the grate and for direct illumination); Orthocon; metal-hydro; Royal Bromide enlargement.

Apropos of threadbare motives and their treatment along new lines, we are pleased to welcome Marshall Fowler's picture of sheep, page 142. Most camera-efforts in this rural field show no attempt at a pleasing arrangement, the animals moving or standing in promiscuous fashion. The camerist must exercise much patience or ingenuity if he would capture a group of sheep or cattle with pleasing lines. Whether by mere chance or dint of perseverance, Mr. Fowler has produced a group of much artistic merit. Data: 1A Kodak; R. R. lens; stop U. S. 4; Eastman film; $\frac{1}{25}$ second; Kodak powders in tank; 5×8 Velvet Bromide enlargement.

The pictorial presentation of real winter in the woods, on page 142, looks as if it might have rested on a painter's easel, it is so ingenuous in its appeal. It is a happy bit of naturalness, quiet and peaceful, with easy, artistic lines. The foreground here is particularly pleasing with its contrasted sunshine and shadow, fallen tree-trunks and branches. No data.

ON THE GROUND-GLASS

Edited by WILFRED A. FRENCH

Art-Forgeries Revealed by Photomicrography

A DEMONSTRATION of the value of photography in detecting spurious works of art was given by Prof. A. P. Laurie, of the University of Edinburgh, before the Royal Academy in London recently. Some of his demonstrations amazed his audience, although he warned his hearers that evidence by his method must be applied with other evidence, which had nothing to do with photomicrography.

Professor Laurie prefaced his lecture with a short discussion of the similar aid to be derived from particular pigments, according to the date of their appearance or disappearance in the history of art. By means of a table dated from the year 800 to 1800 A.D. he showed that, while the use of certain pigments had persisted during the whole period, others had died out during the middle ages. At intervals new ones appeared, two at least, chrome yellow and Scheele's green, which had not been used before 1800 A.D. Prussian blue was also a late comer, beginning about 1750 A.D. Knowledge of these and similar facts would limit considerably the field of possibilities in establishing the date of a picture.

Professor Laurie then showed on the screen ordinary photographs of a painting by Watteau and of a good copy by a modern artist. Seen thus, it was impossible to distinguish between the two; but when photomicrographs of a head in the original picture and of its copy, magnified about three diameters, were thrown on the screen, a striking difference in the brushwork became apparent. That of Watteau was extremely fine, following the contours of the head with logical beauty; whereas that of the modern copyist, good though his work appeared without painstaking microscopic aid, was really haphazard.

In the same way the lecturer showed photomicrographs of the brushwork of Mabuse, Raphael, Van Dyck, Rembrandt, Teniers, Hals, Hobbema, Ruysdael, Velasquez, Corot and Troyon. Two series, of eyes and of details of foliage, as treated by the different artists, were extremely interesting not only from the point of view of identification, but as an object-lesson to students of masterly handling.

The Mona Lisa Again

It may astonish some PHOTO-ERA readers to learn that there are many art-connoisseurs who are skeptical regarding the genuineness of the picture of Mona Lisa, which was recovered recently in such a theatrical manner and restored to the Louvre. It is asserted that a country which can produce imitations of works of art so cleverly executed as to deceive even experienced art-experts, is capable of making a copy of Mona Lisa that might pass easily for the lost original. The apathy displayed by the authorities towards the alleged thief is in itself suspicious. These doubting Thomases assert that, unable to recover the stolen Mona Lisa and realizing that something should be done soon in order to profit by the sensational disappearance of the picture, the authorities conceived the idea of having a duplicate prepared and plausibly brought to light.

The incidents which immediately followed the recovery of the picture were highly sensational, but savored of insincerity. Why, the director of fine arts

in Rome, after hastily examining the picture alleged to have been recovered, declared it to be the lost original, and offered to give up his official position — salary attached — if his statement proved to be unfounded. The alacrity with which officials approved the verdict of the Florentine art-dealer — to whom the self-confessed thief tried to sell the picture — reminded certain skeptical persons of the fiasco of Dr. Cook's enthusiastic reception by the Danish people after his supposed discovery of the North Pole. A shrewd American businessman remarked that the \$48,000 reward paid to the Florentine art-dealer for recovering the picture was a very small sum compared to the millions of dollars' worth of advertising that had already accrued to the famous portrait.

Another thing that has been regarded as "fishy" is that, according to his confession, the alleged thief concealed the wooden panel, upon which the portrait of Mona Lisa was painted, under his blouse and departed without exciting the least suspicion. The panel, as taken out of its frame, measured 21 x 30 inches! If any one thinks that it is easy to steal away with an object of such dimensions concealed on his person, let him try the experiment — in his home or among friends. There are doubtless many who, without wishing to impugn the integrity of distinguished art-authorities, have declined to believe the story of the recovery of the stolen Mona Lisa, but are rather disposed to consider the whole affair a clever scheme devised to lure the curious and the gullible — of which there are millions scattered throughout Europe and America. The play was well planned and effectively staged, and the production with its picturesque settings and eminent *dramatis personae* did, indeed, astonish the world. It is interesting also to speculate as to the number of persons who will journey to Paris next season for the purpose of gazing upon a picture which, even if it be the original, has long ago been pronounced by recognized art-experts to be nothing more than a pictorial wreck.

The First Motion-Picture

In a recent issue of a large American daily, the statement was made that a camera, operated by a winning horse breaking a thread, had been invented in France to judge races.

Shades of Muybridge! The managing editor ought to have consulted a photographic encyclopedia, where, under "Kinematography" or "Motion-Pictures," he would have discovered that so long ago as 1877, in his investigations of the progressive movements of animals, Edward Muybridge, an American, erected a large shed containing a battery of cameras and, stretched in front of it, at right angles, a series of threads, which were broken as the subject (a man on horseback) proceeded along the course. The breaking of each thread communicated electrically with the corresponding camera in the enclosure and effected the necessary exposure just at the moment when the horseman was opposite the lens. As dryplates were less sensitive in those days than at the present time, the resultant pictures were only silhouettes; yet, when arranged in order and viewed in a *zietrope* — an invention ascribed to Mr. Muybridge — the result was a series of very satisfactory and convincing motion-pictures.

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Edited by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department
Address all such communications to The Crucible, PHOTO-ERA, 383 Boylston Street, Boston

Universal Developers

I. — Duratol

DURATOL, one of the newest of the coal-tar developers, is used only in combination with hydroquinone. While it differs but slightly in its chemical composition from metol, its action is considerably different in that when combined with hydroquinone fogging seems to be almost impossible. It is non-poisonous; it brings out detail as well as pyro, gives good density without blocking the highlights, keeps well in solution both before and after use, works equally well on plates, films and papers, is excellently adapted to tank-development. It permits the use of a large percentage of hydroquinone, which is very cheap, and it does a very large amount of work. The following formula is suitable for plates, films, lantern-slides, gaslight and bromide papers:

Water	40 ounces
Duratol	15 grains
Sodium sulphite, anhydrous	1 ounce
Sodium carbonate, anhydrous	2 ounces
Hydroquinone	75 grains

Dissolve the Duratol in 32 ounces of warm water, about 120 degrees Fahr. Do not use water that is hard. If boiling does not soften it, use rain or distilled water. Mix the sodas *dry* and add them to this solution. If they are added separately, a precipitate will result. Then add the hydroquinone, which will dissolve quickly. Allow the developer to cool to about 70 degrees, then filter, if desired, through cotton or filter-paper, and make up the volume to 40 ounces by adding more water.

Used full strength, plates and films develop in 5 to 8 minutes. The factor is 9 to 15, according to the density and contrast desired. A small factor may well be adopted for portrait-work and all subjects requiring delicacy and softness, and a large factor for landscapes and other subjects in which more vigor is wanted.

For tank-development, take 1 part stock-developer and 3 parts water. The time will be 30 minutes at 65 degrees Fahr. For fast plates and films, increase the time of development about one-fourth.

If to that portion of the stock-solution which is reserved for developing plates and films a solution of acetone sulphite be added, the keeping-qualities of the developer are further increased and the fogging-tendency of time-expired or faulty emulsions are considerably restrained. This fogging propensity, which is too often erroneously ascribed to the developer, is enhanced by diluting the developer; hence the advantage of using acetone sulphite for tank-work. Prepare the solution by dissolving 1 ounce of acetone sulphite in 7 ounces of cold water, and add 1½ fluid ounces to each 40 ounces of D. Q. stock-developer.

For gaslight and bromide papers the stock-developer is used full strength; the amount of potassium bromide

solution, 10 per cent, depending upon the tones desired and the particular emulsion in use. In general:

For blue-black tones, omit bromide.

For platinum-blacks, add 1 drop of bromide to each 2 ounces of developer.

For warmer blacks, add 4 to 8 drops of bromide to each ounce of developer.

For sepia by the sulphide process, omit bromide.

For sepia by the hypo-alum process, add 4 to 8 drops of bromide to each ounce of developer.

Development of papers will vary from ¾ to 2 minutes in duration, according to the brand, thus affording great control in development. Rinse prints before fixing or use an acid short-stop.

Photographic Reproductions with the Aid of Blue-Prints

JOHN LEWISOHN, of New York, has invented a method of making colored photographic reproductions, in which the blue coloration in a blue-print is utilized as one of the primary colors.

A negative of a colored object is made on an ordinary orthochromatic photographic plate, using a yellow-colored screen, in order to obtain the best color-values. From such a negative, an ordinary blue-print is made, which blue-print will, of course, show up the different shade-values in their proper proportions. This blue-print is then colored, either wholly or in part, by applying red eosine and aurantia, or a mixture of the two, to modify the blue to form any of the spectrum-colors, the blue coloration showing through the applied washes with more or less intensity, depending upon the extent of the coating-wash. Should it be desired to make all or any material portion of the print either red or yellow, or any other color in which blue is not used, the blue of the blue-print is either wholly or partly dissolved by a weak solution of silver nitrate, which will fix the colors, and, at the same time, gradually bleach out the blue. Further, the blue-print may be washed with this solution, if it is desired merely to weaken the blue color of the object, after the eosine or aurantia has been applied, or a mixture of the two, to form any of the spectrum-colors involved in these two primary colors. Should it be desired to restore the blue locally or entirely, or to darken the blue color, the blue-print is respectively touched up or bathed with a solution of ferric chloride, and this ferric chloride may be applied in stronger solution or in succession until that part of the object is virtually black. Instead of painting or bathing the entire print in any one of these colors, certain spaces may be touched up locally in order either to darken or lighten those particular parts. In addition to this local treatment, the entire print may be submerged in either of these primary colors, or any combination of the same, to give the different color-background and a different tint to the entire picture. — *Scientific American*.

NOTES AND NEWS

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Miles A. Seed

WITH sincere regret we record the death of Mr. Miles A. Seed at his home in Pelham Heights, New York, Dec. 4, 1913.

His first experiments in the making of dryplates were performed in the basement of his home in Woodslawn, near St. Louis, Mo., while he was an operator in a St. Louis studio. In 1883 he built a plate-factory beside his home, the business being incorporated as the M. A. Seed Dry-Plate Company.

In 1902 the business, which had achieved large proportions and an enviable reputation for high quality, was acquired by the Eastman Kodak Co. Mr. Seed continued with the plant for several years, finally taking up his residence in Pelham Heights, where he devoted himself to the flowers he loved and which for many years had been so much a part of his life at his St. Louis suburban home.

Intimate acquaintances of Mr. Seed speak of him in the highest terms and the photographic profession at large knows of his business integrity. During his active business life, as well as since his retirement, Mr. Seed was constantly active in church and charity work, and it was from a cold contracted on a visit to his Bible class in the army barracks of Fort Slocum that his fatal illness developed.

Souvenir Guide-Book through Europe

To Americans who travel through Germany with seeing eyes, and who are impressed with the seething, commercial and manufacturing activities with which that country is pulsating, it is obvious that the Germans have earned the name, "The Yankees of Europe." There is scarcely an industry in which these enterprising people do not excel us; not a day passes that does not give the overconfident, though industrious, Yankee merchant or producer proof of the superior enterprise of his German competitor. Whatever may appear to the American tourist as an innovation, has actually been in use by the wide-awake Germans for years.

As an instance of this ceaseless commercial spirit may be cited a trifling feature of the magnificent steamship line, Hamburg-American — the travel-book issued by this company *free*, to its patrons, the "Guide through Europe." The volume is published once every three years, each time revised up to date. Its nine hundred pages cover Germany, Austria-Hungary, Switzerland, Italy, France, Belgium, Holland, The United Kingdom, Sweden, Spain, Portugal, Russia, The Balkan States, Turkey, Egypt and Algiers. The information is condensed, clear and accurate. There are up-to-date maps of the principal cities and panoramas, numerous illustrations of sights and landmarks, a table of exchange from and into U. S. Currency, and numerous advertisements of reliable hotels, pensions, shops and German manufactured articles, distributed throughout the book.

Each outgoing steamer of the company has a limited supply of these thoroughly excellent guide-books, printed in English, a copy of which is presented to the passenger as he boards the steamer bound to Europe. It is impossible to procure this book in any other way. It cannot even be purchased.

Eastman Professional School

THERE are two principal ways in which a professional photographer may keep informed of the newest and best methods in photography. One is to attend the more important conventions every year; the other is to attend the Eastman Professional School whenever it is within convenient traveling-distance. The route-list follows:

Buffalo, N. Y.	March 3, 4, 5.
Cleveland, O.	March 10, 11, 12.
Grand Rapids, Mich.	March 17, 18, 19.
Indianapolis, Ind.	March 24, 25, 26.
Chicago, Ill.	March 31, April 1, 2.

Kodak Advertising-Awards

GRAND PRIZE CLASS

<i>First</i> — W. Shewell Ellis, Philadelphia	\$500
<i>Second</i> — E. Donald Roberts, Detroit, Mich.	400

CLASS A

<i>First</i> — Geo. J. Botto, New York City	\$500
<i>Second</i> — Chas. Luedecke, Philadelphia	400
<i>Third</i> — Belle Johnson, Monroe City, Mo.	250
<i>Fourth</i> — Clifford Norton, Cleveland, Ohio	150
<i>Fifth</i> — J. A. Glenn, Albany, N. Y.	100

CLASS B

<i>First</i> — Albert F. Snyder, Philadelphia	\$300
<i>Second</i> — Milton F. Gentsch, Philadelphia	200
<i>Third</i> — Jas. L. Cornwell, Dayton, Ohio	100
<i>Fourth</i> — Geo. H. Seip, Philadelphia	50
<i>Fifth</i> — Hobart V. Roberts, Utica, N. Y.	50

THE JUDGES

Manly W. Tyree, President, Photographers' Association of America, Raleigh, N. C.; Dudley Hoyt, Photographer, New York City; C. C. Vernam, Advertising-Manager, Street & Smith Publications, New York City; O. C. Harn, Advertising-Manager, National Lead Company, New York City; W. R. Hine, Vice-President and General Manager, Frank Seaman, Inc., New York City.

From the circular, announcing the awards to contestants, we quote the following:

"We congratulate those who by their clever work — clever from both the advertising and the photographic standpoint — captured the substantial prizes in our 1913 contest.

"To win, when but twelve winners were to be selected from the 3,500 prints submitted, is a real honor — to lose in such a contest should be no discouragement.

"We thank all of those who participated. The prints which were not awarded prizes will be returned at an early date, and during the winter we shall send to each contestant a portfolio showing a number of the prize-winning pictures.

"EASTMAN KODAK COMPANY."

Anso Company Offers \$5,000 for Photographs of America's Lovely Women

This is the first announcement of a contest of highest interest to both amateur and professional photographers. It not only affords the opportunity to win a substantial cash prize, but to gain considerable publicity by having your photographs exhibited to admiring audiences, composed of thousands of people from all parts of the country. The purpose of this contest is to obtain portraits of fifty of America's loveliest women to be exhibited by Anso Company at the Panama-Pacific Exposition in San Francisco.

Fifty photographs will be chosen in all, and prizes totaling \$5,000 will be distributed as follows:

First prize	\$500
Second prize	450
Third prize	350
Fourth prize	250
Fifth prize	200

Twenty prizes of \$100 each.

Twenty-five prizes of \$50 each.

The selection of the winning photographs will be made by three impartial judges, chosen for their special ability to appraise true feminine loveliness.

This contest will, undoubtedly, create national interest, and it will afford a real opportunity for enterprising photographers to profit by it. To promote this national interest, Anso Company will feature the contest extensively through advertising in the leading publications. In succeeding issues of PHOTO-ERA additional plans, to give photographers the greatest benefit from this contest, will be fully outlined. This special assistance to be rendered by Anso Company will be very effective.

The contest will begin on May 1 and close December 1. It will be open to all professional and amateur photographers, and competitors will not be limited to the use of Anso goods. Each competitor may enter any number of photographs, taken with any camera, and printed on any paper. The full details of the competition are being printed in a special folder which will be distributed through Anso dealers.

What is Photography?

THE question of the day with camera-workers is, When does the work of the photographer stop and that of the artist begin on what to-day is called a photograph?

This subject was presented to the members of the Portland Camera Club, February 2, by Mr. O. P. T. Wish, who had just returned from Boston where, as secretary of the Portland Society of Art, he had attended the annual exhibition of the Boston Art Club.

The reason for this question, at this time, is because of the results obtained by camera-workers all over the country with soft-focus lenses, and by the gum-bromoil and other processes now so extensively used. It is time for camera-workers to define what a photographic print consists of. If it is purely camera-work, well and good. If it is an inferior imitation of a half-printed etching that any foreman in a printing-establishment would throw into the waste-heap, why call it a pleasing piece of camera-work? Mr. Wish put the above question to that famous photographer, Garo, when in Boston, and his answer was, "The photographer's work ceases when the negative is produced." The same question was put to Henry Rankin Poore, of New York, whose book on composition is a well-known standard authority for artists, and who lectured before the Boston Art Club, January 31. Mr. Poore's answer was somewhat different

from Garo's — "The work of the photographer ends, and that of the artist begins, when the photographer ceases to use sunlight as his medium to produce results." Photographic work when it comes before the jury is usually judged by artists in oil — artists who do not understand camera-methods any better than the camera-man understands the method or color-harmony used by the artist. Mr. Wish believes with Mr. Poore that the work of the photographer ends when sunlight or artificial light ceases to be the medium to be used in producing results. In discussing the question with Mr. Garo, Mr. Wish claimed that we ought to have two distinct classes of photographers to-day. One to be called photographers, and the other, artist-photographers; the first class to be those who believe in straight photography and the other, those who use any method to produce their result.

Who of us feel like finding any fault with the beautiful results obtained by Garo and his Photo-Clan, the Buffalo Pictorialists or the Photo-Fellows of Chicago? Yet how are those men who are not artists with the brush, but are artists in just as true a sense with the camera, to change their method?

Taking these two questions as a foundation, the members of the Photographic Section of the Portland Society of Art, or the Portland Camera Club, discussed the matter fully and openly, but were unable to come to any decisive conclusion, and the question, "When the work of the photographer ceases and that of the artist begins," remains for others to answer. Why not have a full and free discussion by the readers of PHOTO-ERA?

Lecture by Henry Rankin Poore, A.N.A.

At the Boston Art Club last January, before an audience composed of artists, laymen and a number of photographers, Henry Rankin Poore, author of *Pictorial Composition and the Critical Judgment of Pictures*, delivered a particularly-prepared lecture, "Art and the Layman." In the course of his remarks the speaker sought to prove that the average educated person knows more about art than he thinks he does, and then considered the fact that he ought to know more than he knows he does. He declared that the layman's judgment of art is not biased by the means, so important to the artist. He does not know art through a formula of *tonalism*, *impressionism* or *futurism*, but meets the broader question of art, having the same point of view because he has acquired most of the principles at school. By this is not meant the art now taught in the public schools, but rather the principles underlying production, all of which are to be found in the old rhetoric. He discussed the added difficulties which embarrass the painter from which the literary artist is free. "While good literature may plume itself in having its winged words speed directly to their goal, elements have entered into the picture unbidden but sometimes welcome, and others on which the artist has counted have strangely failed to register. It is safe to say that rarely has a picture absolutely expressed the first thought of its author."

The speaker makes a plea for study in the schools of the great principles of art which may be applied to all the arts in common, as to literature, music, painting, sculpture and architecture. These principles are not even taught in the art-schools, which are really places for the study of the technical problems of art and do not touch its higher significance.

Mr. Poore closed by naming a number of the popular misconceptions of art, reconstructing the old dictum, that beauty is truth, into "beauty is unity"; touching upon idealism and realism and scotching the fallacy that in painting there is "only one way."

Photographers' Association of America

FIRST EXECUTIVE BOARD MEETING

At the call of President Manly W. Tyree, the Executive Board of the Photographers' Association of America met in executive session at the Hotel Ansley in Atlanta, Ga., on Jan. 12, 1914. The following members were present: Manly W. Tyree, President; W. H. Towles, First Vice-President; Homer T. Harden, Second Vice-President, and L. A. Dozer, Treasurer.

At the special request of the President, representatives of manufacturers and editors were called in special conference in order to obtain new ideas to be introduced at the next Convention, and to ensure perfect coöperation between the Association, as a whole, and the firms interested in photographic supplies and magazines.

After a full discussion in conference with manufacturers, editors and dealers, it was voted unanimously to hold the Convention from June 15 to June 20, 1914, in the Auditorium, at Atlanta, Ga.

The committee appointed to employ a general secretary was represented by George W. Harris, Chairman, and Ben Larrimer.

The committee of the Women's Federation was represented by the President, Miss Pearl Grace Loehr, and Mrs. Sarah F. T. Price, Secretary. The members of the Federation were requested by the President to present plans to be followed out in their work.

OFFICIAL EMBLEM

Messrs. Dozer and Hoffman were appointed as a special committee to procure designs for buttons intended to serve not only as an emblem, but as a permanent insignia to be used on all membership-cards, stationery, membership-certificates, etc.

Various suggestions and matters pertaining to the conduct of the 1914 National Convention were formerly discussed and resolutions adopted in the regular order.

THE ASSOCIATION-RECORD

It was voted to publish the usual Association Record, which should be in the hands of members within thirty days after the close of the Convention.

PICTURE-EXHIBIT

Some new features will be inaugurated this year. Three pictures will be solicited from each exhibitor. These pictures will be submitted to a jury composed of three — one artist and two photographers of recognized ability. All pictures submitted will be hung. Those rating above 65 per cent will be placed in the Accepted Class; all others will be placed in the Rejected Class. No names will appear on pictures submitted. The jury will be present and upon request will give private criticism. Only accepted pictures will be cataloged. The Board has decided to purchase, not to exceed twenty of the best pictures exhibited, and will pay \$25 each. These pictures are to form the nucleus of a permanent collection. All pictures for this exhibit must be received at the Auditorium, Atlanta, Ga., not later than June 9, 1914. Pictures received after that date will be returned *unopened*.

(NOTE.) The rating that will be given pictures, which compose this exhibit is the personal opinion of the judges, according to their understanding, and will be accepted accordingly, there being no recognized standard in photography.

PROGRAM

The program is designed to be of strictly educational character. It is not the purpose of the Board to show impractical or extraordinary work, but to teach the

members how to use their appliances with understanding, with profit to themselves, and with an eye to a higher standard of photograph-making. With this in view, photographers of national prominence will be engaged to show the manipulation of light and the handling of the customer. These character-talks will be supplemented by a series of studio-demonstrations, conducted *entirely in daylight*, which will be managed by one or two of the regular demonstrators of the various plate companies; namely, Seed, Cramer, Hammer and Central. Plates will be exposed at these demonstrations and, within thirty minutes of the close of each demonstration, these plates will be shown developed on screens so that all can view them. Subsequently, these plates will be projected on to a screen by means of the Bausch and Lomb Balopticon, an instrument designed to receive a full-sized negative in a horizontal position, which is then projected on to a screen like a lantern-slide. While being projected, these plates will be worked in with background, retouched, etched with a knife when necessary — in short, all the latest ideas and methods of working up the negative will be fully carried out by expert retouchers in full view of the audience. After these negatives have been worked up, they will then be handed to the print-demonstrators, who will make prints from them on the various grades of paper. The print-demonstration will be conducted by the various paper-manufacturers, each in his own stall, fully equipped to show all the latest ideas in printing and masking the negative to produce the finest possible result. The rest of the program will consist of other educational features along business-lines.

THE DAILY PAPER

It was agreed that a daily publication of some nature would be of considerable interest and, therefore, the Board decided to allow Messrs. Ahel and Chambers to publish a daily paper during the days of the Convention, and of which they will be given full charge. This paper will be called *The P. A. of A. National Daily*. It will contain a program of the day's proceedings, with interesting news-items gathered on the Convention floor.

AUTOCHROME-EXHIBIT

On account of the interest of the profession at large, and the general public in color-photography, the Board will assemble and exhibit a collection of autochromes and other color-processes.

COMMITTEES

Stationery, W. H. Towles; Buttons, L. A. Dozer; Headquarters, Homer T. Harden; Entertainment and Publicity, the entire board; Information, local committees appointed by the Atlanta Organization; Transportation, Homer T. Harden; Association-Record, Manly W. Tyree and Homer T. Harden; Legislation, R. W. Holsinger; Membership and Credentials, Walter Holliday and Joseph Knaff; Applied Ethics, Ben Larrimer; Homer T. Harden and Miss Emma Gerhard; Progress of Photography, L. G. Studebaker, J. L. Cusick and O. W. Cole; Foreign Affairs, Frie MacDonald, Eduard Blum and D. P. Thompson.

HEADQUARTERS

Hotel Ansley has been selected as the Headquarters for the Convention. The officers' regular reception to the members will be held there on Monday evening.

MEMBERSHIP

It was agreed to ask the manufacturers who have traveling salesmen to coöperate with the Executive Board to increase the membership of the Association.

The Secretary was authorized to conduct his campaign, also to work out plans whereby the Association could be of service to the photographers every week in the year. The Board agreed to recommend to the Congress a change in the dues of the Association, whereby those photographers, who are not able to attend the Convention, may belong to the Association upon the payment of a certain amount of dues, and that these members, upon the payment of an additional sum, will be given tickets of admission to the Convention. So far, the amounts which shall be recommended have not been determined.

EMPLOYMENT-BUREAU

The Board decided to establish at once a National Employment-Bureau, open to all members of the Association, without charge.

TEMPLE OF CHILDHOOD

The Board took up the current issue, The Temple of Childhood, and from the data it was able to gather at this time, it is its unanimous opinion that the operation of The Temple of Childhood, as it affects the photographic profession, does not foster the fraternal spirit which the Association has been trying to establish among those interested in photography.

WOMEN'S FEDERATION

Miss Pearl Grace Loehr and Mrs. Sarah F. T. Price presented the following report of their work up to date and their plans for future work:

January 1 letters were sent out by the President, Miss Loehr, to the thousand women-photographers on the list of the Women's Federation. On the same day letters were sent out by the Secretary of the Federation to all members of the Circle, giving the full plans for the Circle work and asking that photographs be submitted.

It is the purpose of the Federation to carry on a schedule of publicity in the prominent newspapers in the United States, telling of the work of women-photographers of this country. These accounts will be accompanied by suitable photographs made by women.

LOCAL PUBLICITY

In order to reach and interest the people of Atlanta in the Convention, the members of the Women's Federation have arranged to have pictures on display in the Atlanta Public Library several weeks before the Convention is held. The women of Atlanta will be reached through the Federation of Women's Clubs, and the young people of high-school and college age will be interested in special ways.

The women have taken upon themselves the entertainment of the visitors at the Convention. Arrangements have been made to serve luncheon in the Auditorium from 11 to 2, each day, and cold refreshments, at reasonable prices, at all hours of the day.

BOOTHS

The spaces sold to the manufacturers and dealers in Convention Hall will be provided with booths and decorations following a uniform plan, at the expense of the Association.

TREASURER'S REPORT

Treasurer Dozer's report shows the P. A. of A. treasury to be in its usual good condition, with a balance of \$5,510.58 at the close of 1913.

A hearty vote of thanks was tendered by the Members of the Board to the photographers and dealers of Atlanta for their cordial reception during their stay in the city.

JOHN I. HOFFMAN, Secretary.

FOR a long time the directors of the Bausch & Lomb Optical Company have been planning a scheme of "physical efficiency" which was finally put into operation at the beginning of the year. It is a movement looking toward the betterment of employees, and as such deserves high praise.

Each applicant for work at the Bausch & Lomb factory will be asked to allow a physical examination. It will not be compulsory, but there is little doubt of it becoming voluntary, when its advantages are understood by the applicant. The carpenter who is found to have poor eyesight will not be given the finer work to do, although he will be paid a carpenter's wages. He will be given carpenter-work that is not a strain upon his eyes, and which would eventually make them weaker, and at which work he would not be doing justice to himself or to his employers.

A man with a weak heart will not be put at a bench with a man who is perfectly sound in that organ, for it has been proved that in his endeavors to keep pace with the stronger man he works, in reality, double time, in the strain he puts upon his heart and nervous system. The man weakened with hernia will not be pitted against the man with perfect strength, although the pay will be equal, but each man according to his physical power will be placed where that power can work without physical drain.

Perhaps no better illustration can be found of the merits of the new system than in the case of one young woman, already in the employ of the company, who asked for the examination, and it was found that she possessed excellent eyesight, unusually acute hearing and was also a splendid penman. She had been employed in the packing-department doing thoroughly satisfactory work, but it was only natural that when her qualifications were demonstrated she was quickly transferred to the business-office, where good penmanship, quick eyes and acute hearing, particularly in telephone-calls, are of particular value.

Many of the employees who have been at the factory for years are taking the examination, realizing that if there are any physical defects about them, or some trouble lies latent, it will be well to know and eradicate it. Eyes, ears, and body are to be examined by a specialist in each line, and without cost to the employee.

The movement for better conditions along these lines is a natural outgrowth of the hospital established at the factory in December, 1905, and which is now being enlarged, and promises to be one of the most complete of its kind in the world. There will be a men's ward, a women's ward, an operating-room, offices for nurse and physician, as well as an X-ray room. The physician who has had charge of the work in the past will be the chief physician in the newer work and much that is now being carried out is the result of the work and research of Dr. Harold Baker, with whom the physical efficiency idea is a hobby, but whose work has had the support of the board of directors from the beginning.

The Bissell Colleges

A MAGNIFICENT collection of thirty-six portraits by J. C. Strauss, of St. Louis, was shown in January, through the courtesy of Sadakichi Hartmann, the art-writer and critic, and was an inspiration to the students.

Mr. N. Hartmann, of Armenia, won the February prize in the portrait-contest at the College.

At the College Camera Club's monthly contest, in January, the prizes were won by Messrs. Hopsecker, Hill and Zimpher.

Professional Photographers' Society of Pennsylvania

Scranton, March 17, 18, 19

ALL plans are about completed for a rousing old-fashioned convention in the Town Hall, Scranton, with all the new and progressive features added. A big treat is in store for every member who attends.

MANUFACTURERS' EXHIBITS AND DEMONSTRATIONS

There will be a large number of manufacturers and dealers present, and their booths will be arranged with a view to make their exhibitions attractive, interesting and instructive. Many new things will be shown and demonstrated for the first time at this convention.

EXCLUSIVE EXHIBIT OF MASTERPIECES

There will be an exhibit of three masterpieces from each of ten of the leading photographers of America, outside the State Association. This exhibit itself will be a great treat and a rare opportunity to study the works of those who are by general assent recognized as the peers of the photographic world.

PRINT-EXHIBIT

A new departure of the print-exhibit this year, open to active and associate members, will be the classification of the pictures to meet the requirements of all classes of workmen, as follows:

Class "A"—Popular Cabinet Class—six pictures required. Any six pictures, cabinet size, mounted in your regular style, or all on one card. Prints to be made from negatives from which orders have been obtained.

Class "B"—Portrait Class—three pictures required. Any size above cabinet to 16 x 20. Prints to be made from negatives from which orders have been obtained.

Class "C"—Art-Portrait Class—three pictures required. May be made particularly for exhibition, displaying the individuality of the artist.

Class "D"—Commercial Class—three prints. Photographs of anything in the commercial line. Size unlimited.

NOTE: Pictures in any of the above classes may be sent framed or unframed, but *must* not bear the name of the photographer. *Let every photographer make an exhibit, select the class that will be most beneficial to him, and prepare his exhibit at once. Let us have the print-exhibit this year the largest ever.*

SPECIAL NOTICE: As it will require several days to judge and criticize the large number of prints exhibited, all exhibits must be in Scranton not later than Mar. 12, 1914, addressed to J. H. Kellberg, Vice-President, The Hotel Casey, Scranton, Pa. All exhibits for manufacturers should be addressed to W. G. McCaa, Secretary, Town Hall, Scranton, Pa.

CERTIFICATES OF RATING TO ALL WHO EXHIBIT

Herein is where each photographer profits by his membership. Whether he attends the convention or not, each exhibitor will receive a certificate of rating, showing the exact standard of his work. The certificate will bear the signature of all the Judges, and the markings will be known only to himself and the Secretary of the Association.

Particulars regarding printed criticisms and comments, and joint criticism illustrated, will be found on page 98 of PHOTO-ERA for February.

DEMONSTRATIONS

Entirely new and novel methods have been arranged for demonstrations in Portrait- and Commercial-Photography by experts from the most careful pictorial to the everyday "bread and butter" style.

BUSINESS SIDE OF PHOTOGRAPHY

Practical and forceful talks will be given on studio-salesmanship and the business side of photography.

THE LADIES AND ENTERTAINMENT

Scranton's reputation for entertainment is too well known to comment further on it. Just come and see for yourselves. And remember we DO want the Ladies. Bring them with you and come early. Be on hand Monday evening, for there will be something doing every minute, and we want you to receive full benefit.

MEMBERSHIP

The annual dues are only \$1.00. All employees of members will be admitted to the convention free.

J. B. SCHRIEVER, *President*.
W. G. MCCAA, *Secretary*.

B. Y. M. C. U. Camera Club

A SPECIAL exhibition of photographs made by J. C. Strauss, of St. Louis, Mo., is to be held in the rooms of this club March 4, 5, 6 and 7, from 6 to 10 P.M., also Sunday, March 8, from 2 to 6 P.M. All amateur photographers are cordially invited to attend.

Indiana Association of Photographers

THE Executive Board of this association has made arrangements for the nineteenth annual convention to be held at Winona Lake, Ind., from July 6 to 10 inclusive. Although seemingly a hard task, an attempt was made to get away from the old rut, and it is promised that the forthcoming announcement will prove to be a step in the right direction. At the suggestion of the Secretary, Mr. Otto Sellers, as many demonstrators as could be located were called into conference on the assumption that demonstrators are better acquainted with the rank and file of the fraternity than any one else and that nobody works harder than they to make conventions successful. The program thus worked out should prove novel and we believe well worth while.

Officers and members present at the three days' meeting of the Board included R. Morris Williams, of Evansville; First Vice-President, R. E. Smith, of Attica; Second Vice-President, S. A. Hockett, of Fairmount; Treasurer, C. A. Shubart, of Princeton; Secretary Otto Sellers, and Trustee George Graham Holloway.

Ketten's Motion-Picture Cartoon

MAURICE KETTEN's copyrighted picture-story, "The Pleasure of Moving Pictures," which was published by courtesy of the Press Publishing Company (*The New York Evening World*) in our December issue, has proved entertaining and instructive to many. More forcible than the printed word, this product of the artist's pen has served to correct the impression which prevails in many minds that motion-pictures actually move on the screen. This, as a matter of fact, is not so. Motion-pictures do not differ from ordinary stereopticon-views—which sometimes are seen to move when the stereopticon is carelessly moved or jarred—except that the pictures to be projected are on film instead of on glass, and are shown on the screen at the rate of sixteen per second.



Rising to the occasion—

meeting the requirements of the situation, whatever it is—that is what you want to feel that the lens in your camera is doing—so that you can undertake the things in photography, indoors or out, that are impossible with an ordinary lens.

Bausch^{and} Lomb-Zeiss TESSAR LENS

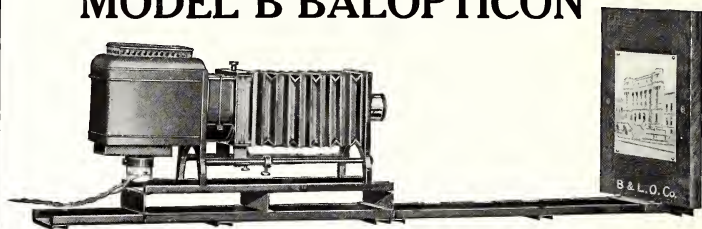
gives you this sense of mastery, for this superb lens solves every problem. The Ic Tessar, with *three times the speed* of an ordinary rectilinear lens, its wonderful illumination, its perfect definition, overcomes obstacles in speed and light that so often spell defeat. The Iib Tessar, readily adjustable to almost any hand camera, has *61% more speed* than ordinary rectilinear lenses. It makes possible picture-taking on grey days or under the most difficult conditions, either in the house or out-of-doors. You will be delighted, too, with the splendid CONVERTIBLE Protar Lenses, surprisingly rapid and with many uses.

We will gladly send you a sample print and information regarding lenses. You can try a Tessar on your camera. Ask your dealer.

Bausch & Lomb Optical Co.
622 ST. PAUL STREET ROCHESTER, N.Y.

When Ordering Goods Remember the PHOTO-ERA Guaranty

Enlarging and Lantern-Slide Making with MODEL B BALOPTICON



Model B Set Up for Enlarging (with Incandescent Lamp)

Three Outfits in One :

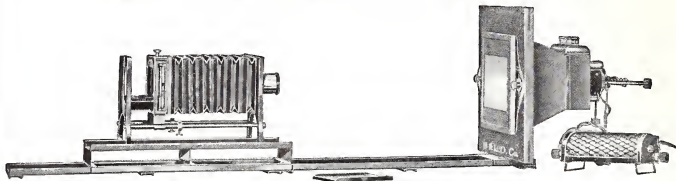
Balopticon for Lantern-Slide Projection, Enlarging-Camera and Lantern-Slide Camera

Accessories for enlarging and lantern-slide making include:

1. Special Holder for negatives up to 4 x 5 in., an area approximately 4 in. in diameter being illuminated.
2. Easel-Board, accommodating 11 x 14 in. paper, held either vertically or horizontally.
3. Frame for holding negatives up to 5 x 7 in. —attaches to easel-board after removal of central portion of board; lamp-house with ground-glass
4. Special Frame, fitting in slide-carrier support and taking ground-glass and lantern-slide plate-holder.
5. Metal Tracks with mounting for Model B Balopticon and easel.

Model B Balopticon is supplied with either arc, incandescent or acetylene lamp, as desired, and may readily be used separately for regular projection.

Send for special circular or further information.



Model B Set Up for Lantern-Slide Making (with Arc-Lamp)

BAUSCH & LOMB OPTICAL CO., 622 St. Paul Street, Rochester, N.Y.

LONDON LETTER

CARINE AND WILL A. CADBY

BARON DE MEYER has returned from a visit to the States and it appears to have been anything but an idle one, judging by the many portrait-studies he has brought back with him. One wonders if the American beauties were as proud as those in England to be made famous by him. Some of the best of his studies are being published by our illustrated papers and are simply masterly in treatment and technique. Truly, Baron de Meyer is the Sergeant of photography. Those of Mrs. Ogden L. Mills and Mrs. Ralph Thomas seem to be the last word in portrait-photography, and Mrs. Harry Payne in an ancient Egyptian fancy dress is an exceptionally pictorial bit of photographic work. The same magazine that published some of Baron de Meyer's unphotographic and pictorial portrait-studies gives us a little shock, for as we turn over the page, still seeing these decorative and distinctive pictures, we are crudely bumped against hard reality by a full-page illustration of the artist himself and his wife. "The Baron and Baroness de Meyer" is written underneath one of the wickedest libels of journalistic snapshots, for not in their most unlucky moments did they ever look like this.

Mr. Hoppé has sprung a surprise on his brother-photographers. We all knew that he was a talented camera-man, but we learned this Christmas that he is a gifted draughtsman as well, for his greeting-card to us was a reproduction of a clever little pen-and-ink drawing, called "The Tango — A Black and White Fantasy." The two carnival figures dancing are as attenuated as fashion's devotees are trying to become, and there is a grace, movement and charm about it that reminds us of the Munich school of draughtsmen. We hear that it has been published in PHOTO-ART for February, page 103, and we are eager to know if Mr. Hoppé will pursue this new path he has struck out.

Plate-makers have been getting into trouble lately with a body of photographers who call themselves the "Photographers' Union." These militants threaten a boycott, for their grievance is that photographic manufacturers are growing rich too quickly, and that the price of plates, which over here has risen alarmingly this last year, is out of all proportion to their actual cost. Probably, if it is a fact that all photographic plate-makers are becoming millionaires (which one cannot but doubt in spite of the P. U.), it is because photography is becoming more and more popular and each year sees a great increase in the consumption of plates and films.

Every firm we hear of is enlarging its premises or moving into new ones. Mr. Thomas Illingworth, who is so well known for his photographic papers, has moved into larger works and when we hear of this firm coating three miles of paper — some of it 4 feet 6 inches wide, too — a day, one imagines that space must be somewhat necessary. After this we can keep cool when we hear of the millions of postcards they turn out and the ten tons of ice that their refrigerating machine makes a day and the twenty-foot-long bromides they made for the exhibits of the Australian Commonwealth.

But carbon tissue is, perhaps, the product on which Mr. Illingworth first built a reputation, and this is on sale in the States. Besides increasing the number of printing colors lately to fifty, he manufactures thirty different surfaces of transfer-papers. This, in our opinion, is the right direction in which to work to make carbon-print-

ing universally popular, for in the old days there was no choice in surfaces, which, when printing varying subjects, was a serious drawback.

Considering the simplicity of the process — the only requirements being hot and cold water and a little alum — it is astonishing that, for certain subjects, every amateur does not adopt it.

The festive season of Christmas and the New Year are well-nigh over. The Christmas numbers of the monthly magazines are long since forgotten, as the tendency is to get them out earlier every year. The result is that the January numbers are fast developing into a sort of second edition, and are just as full of so-called "seasonable" subjects as the December issues. The prevailing note this year has been the increased use of color-reproductions. Some of our own Swiss winter figure-studies have been so well done (notably a frontispiece to the *Ladies' Realm*) that friends have mistaken them for color-reproductions from actual autochromes. This is certainly a high tribute to the reproducer's work.

As illustrating the marvelous way photography for purposes of illustration and advertisement is going ahead, there can hardly be a better example than the year-book, called *The Salvation Army Social Work, 1913-1914*, which has just reached us. In this really wonderful volume, Mr. David Lyell has one hundred and fifty camera-studies of what are quite truthfully called, "Pictures of Joy and Sorrow," for each one certainly tells its story most graphically. Mr. Lyell has not only taken photographs of his subjects, but in some wonderful way he has got life and movement into them. We feel that we are actually seeing the active work of the Salvation Army amongst the peoples of the world going on before our eyes. The range of subjects and locality is immense. On the same page are pictures of boys learning to do dairy work at Lytton Springs Farm, U. S. A., and a colony of ex-prisoners in Switzerland. We turn over the leaf and are confronted with "Army Officers" (all women) at work among the hop-pickers in Kent, England, and an excellent interior of mothers and children in a White-chapel (London East End) shelter, only to be transferred on the following page to far Japan, where we see the Salvation Army's "Prison-Gate Home," before which are standing a big group of Japanese men, presumably and certainly looking ex-prisoners.

But we have only lightly touched on the subjects dealt with. There are a few obviously posed pictures — notably, "As we find the Homeless at 2 A.M.," which is complete, even to the policeman on duty — that are not as convincing as some of the less perfect, but more spontaneous photographs; but as a whole the book is an object-lesson, both to photographers, generally, and to advertising-firms, for never have we come across such a graphic and appealing advertisement; and not the flintiest heart, after studying the pictures, could withhold a subscription.

The Paget Color Plate seems to be interesting many amateurs. We continually come across specimens. The great advantage of the process, apart from its comparative cheapness, is that when once the photographer has achieved a "parade-stück," he can produce any number of duplicates by simply making positives and inserting the special color-screen (made for the purpose) behind it. The chief drawback seems to be the failure to get vivid and true color-rendering, at least in unskilled hands. There is a tendency, too, for the colors to go wrong if the plate is not looked at exactly squarely. But this is, no doubt, a fault of the worker, not the plate, for we have seen many excellent examples of color-photography made on Paget plates.

BERLIN LETTER

MAX A. R. BRÜNNER

In this present year there are two memorial days identified with photography. In January, 1914, seventy-five years had passed since the Frenchman, Daguerre, and, a little later, the Englishman, Talbot, astonished the world with two discoveries which form the basis of present-day photography. The famous scientist, Arago, declared on the seventh of January, 1839, in the Paris Academy of Sciences, that the painter Daguerre had been successful in obtaining permanent pictures of any object by means of the light on particularly-prepared silver plates. The process, about which the inventor rigidly refused to give any particulars, was the result of troublesome work lasting for years, during which time he was assisted by his countryman, Niépce.

In order to understand the value of the invention, we should remember that the camera-obscura at that time was a box with smoked inner walls, fitted on the front side with a lens and on the back with a sheet of opal glass. The people watched with amazement the subtle pictures which the lens threw upon the focusing-screen. In the year 1814 Niépce began in the city of Châlons-sur-Saône his experiments, to make these pictures of the camera-obscura permanent. He employed for this purpose a solution of asphalt in lavender-oil spread upon a copper-plate which was exposed in the apparatus for several hours to light. In this way he obtained plates which, after a further suitable preparation, could be used in the printing-press, and to these pictures he gave the name "Heliographs." By some accident Niépce learned that Daguerre was making similar experiments in Paris. Both men coöperated and when Niépce died, Daguerre continued the work in the very strictest seclusion — not even his best friends were admitted into his laboratory, until at the end of 1838 he believed that he had reached his goal and applied to three members of the Paris Academy — Humboldt, Biot and Arago.

These gentlemen induced the government to grant a yearly revenue of six thousand francs for him personally and four thousand francs for the son of his late assistant. Thus, at last, he consented to reveal the secret, and in August, seventy-five years ago, Arago was able to make public at a meeting of that noted academy the principles of the new art which was called "Daguerreotype." As is probably known, Daguerre employed a silver-foil covered with silver iodide which, after exposure in the camera, was treated with mercury-vapors. He obtained thus a true image of the particular object in black and white. The new art caused immense excitement; everybody was eager to try it, and the shops of the druggists and opticians had to endure a real storm.

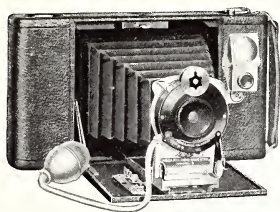
There was, however, a great drawback connected with the invention, which consisted in the fact that only one picture could be obtained from each exposure. This was overcome by the discovery of the Englishman, Fox Talbot, who reported about it to the Royal Society in London the same year. He pressed drawings and similar flat, transparent objects against paper, which had been treated with silver chloride, and exposed this to light. He obtained a reproduction with reversed colors, viz., a negative. Using the latter in place of the original, he was able to produce an unrestricted number of positive copies which, besides, showed the correct distribution of light and dark. These pictures, however, looked very rough compared

with the delicate daguerreotypes. But this shortcoming was removed when glass plates were used. The development of photography has been so enormous that it is needless to explain it. But it was not unexpected, for as early as January, seventy-five years ago, Arago had predicted the immense significance and importance of photography in the various fields of human activity.

The data just given were the object of a lecture recently given at a meeting of an amateurs' society of this city which the writer attended. An equally interesting topic was treated at another club, where the lecturer spoke on photographing without light. Perhaps some readers will call this nonsense, as the term, "photography," implies the use of light. On the other hand, we have in the meantime been accustomed to rays which are invisible, such as the ultra-violet, the Roentgen and radium rays which act upon the sensitive plate. And yet there are other strange ways to produce pictures without light. Polished metal plates having been brought into contact with bromide of silver plates, act upon the sensitive layer, tracing the outlines upon it in complete darkness as is ascertained after developing them. In the same way oil, fat, grease, wood, seeds, leaves, etc., produce pictures without light and lenses. We are thus able to obtain images of pressed plants, also the structure of feathers and wood, portions of blossoms and the like. Starch, sugar and rubber, however, do not show this remarkable effect. Equally effective is the color of printed types on account of the varnish and turpentine-oil contained in the inks. The lecturer showed several really striking examples of contact-prints of a printed sheet from a book, obtained without any light. This must not be confounded with producing a positive print without a camera by putting a printed page or the like in the printing-frame in contact with sensitive paper, for this is the ordinary printing-process with light. In our case even the immediate contact of object and plate is not necessary; a picture is even produced if cardboard and other material is inserted between. We are enabled to photograph landscapes without light, during the night, as a Mr. Zengerlin has shown in the eighties. From a room in Geneva, he has photographed the lake and the surroundings by exposing a glass plate which was covered by a brilliant color for three minutes, which plate he brought afterwards into contact with a sensitized plate. The latter was developed in the ordinary way, and the finished print did not show any difference from one made with light. The experiment has been repeated by others, including the lecturer, whose address the writer heard.

Several times the scientific theater, The Urania, of Berlin, has been mentioned in my correspondence. This useful institute has added a new department, viz., an archive of films for educational purposes, to which the large kinematographic firms of Germany and other countries have contributed considerable material. At the beginning of this year 25,000 yards of scientific films were in the possession of the Urania, which will be used in the following way. Every teacher in the city, irrespective from what school, will be shown, upon application on any forenoon, any desired film, for which service only a small charge is made, and as many pupils are admitted as the lecture hall will hold. In the afternoon illustrated lectures, dealing with topics treated in the schools at the particular time, are given in very simple language, stationary as well as motion-pictures being employed. This new department was organized by Mr. Goerke — the director — two teachers from a university, two from an elementary school and an eminent photographic expert. Connected with the archives is an information-bureau open to everybody.

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Model 3

For Pictures $3\frac{1}{4} \times 5\frac{1}{2}$ Inches

YOU, who are going to buy a new camera this Spring, will do well to consider the peerless Ingentos. The model shown above is in great demand.

The No. 3A, Model 3, offers the beginner and other amateurs, who want a fixed-focus folding camera of the highest quality, the best possible value for the money. This camera is built on the lines of the No. 1A and No. 3 Folding Ingento. Metal body, covered with genuine cowhide leather, brilliant hooded finder, universal focusing-stop, achromatic meniscus lens in an Ilex Automatic Shutter.

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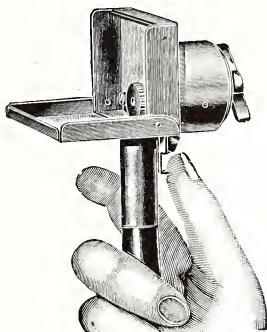
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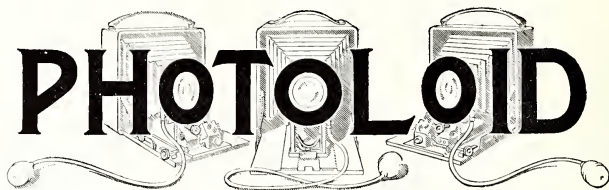


PHOTO-PRINTING REVOLUTIONIZED

CAMERA-USERS, professional or amateur, are talking of **PHOTOLOID**—the new discovery in photographic art.

PHOTOLOID greatly simplifies the securing of artistic results. This process is similar to any "gaslight" paper and no more difficult in manipulation.

PHOTOLOID is an impervious product made of Fiberloid, imperishable, stainless, fadeless and easily washed if necessary without in the least impairing the photograph.

PHOTOLOID has a beautifully fine, hard, matte surface and readily receives the most delicately artistic photograph in the minutest detail, and there is a depth of tone and brilliancy in the finished print not possible in the best of paper, for the highlights, deep shadows and graduated halftones are artistic triumphs of **PHOTOLOID**.

PHOTOLOID is not perishable as paper is.

PHOTOLOID does not need mounting and paper does.

PHOTOLOID does not curl up or fray at the edges—paper does both.

PHOTOLOID comes both translucent and opaque—paper is made in opaque only.

The difference in the permanence and beauty of appearance between **PHOTOLOID** and ordinary print-paper is so great that the difference in cost is not worth considering.

PHOTOLOID is made in Porcelain White opaque, Veined Ivory and Cream translucent. Blacks, Sepias, Olives and Grays printed by direct development.

PHOTOLOID takes watercolors easily, making wonderful miniatures. Assur colors produce beautiful results.

PHOTOLOID is ideal for transparencies.

Its Important Features in brief:

- 1 ➡ **IMPERISHABLE.**
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Size	Packets of half dozen	Packets of dozen	Half gross box
3¼ x 5½	\$.50	\$.90	\$ 5.00
4 x 6	.70	1.25	7.00
5 x 7	1.00	1.75	10.00
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Go to your dealer at once—if he cannot supply you, write to us. We will promptly fill all orders accompanied by remittance, *but be sure to specify the color and size desired.*

Correspondence with dealers solicited regarding special proposition.

The pictures you value deserve to be printed in permanent form. There is only one way—**PHOTOLOID.**

The Fiberloid Company 55 Fifth Avenue
NEW YORK

WITH THE TRADE

"Sail from Boston"

THIS trade-slogan of the Hamburg-American line is one with which PHOTO-ERA is heartily in sympathy. While not America's greatest city, Boston appeals strongly to every true American. Although it is a liberal education to have seen the sky-scrapers of New York, every patriotic citizen aspires sometime to visit the Revolutionary landmarks of Boston and vicinity—literally the cradle of the Republic. And why not in connection with a trip to Europe?

A few days in Boston previous to sailing will prove well spent. Present-day Boston, as well as the Boston of long-ago, has much of appeal, including the Boston Symphony Orchestra, Boston Opera, Art Museum, Harvard University, splendid hotels, theaters and restaurants, and a magnificent park-system.

Boston is the nearest large American port to Europe and its harbor is notable for the facility and safety of its approaches, the ample width and depth of its entrance, and the shelter of its roadsteads, which are not surpassed by any harbor in the world. These conditions and the tremendous recent growth of the city commercially led to the splendid service of the Hamburg-American line between Boston and Hamburg, Germany, with ports of call at Plymouth and Boulogne. The service will be maintained by the well-known twin-screw steamers *America*, *Cleveland*, *Cincinnati*, *Fürst Bismarck* and *Rhaetia*. These ships are provided with every reasonable comfort and the latest safety-appliances. The accommodations in every cabin are excellent, the rates low and the passage short. Camerists sailing for a spring- or summer-vacation in England or Europe will make no mistake in booking by this route.

Seltona

SELF-TONING papers are simplest of all in manipulation, and Seltona continues among them unrivaled for combined detail, brilliancy, depth, softness and delicacy. It has a beauty all its own that appeals strongly to all who see it. Printing out in sunlight, Seltona needs fixing only for brown and sepia tones, or previous immersion in a solution of common salt for any shade from dark brown through purple to blue. Black tones may be had by platinum-toning. Paper, post-cards and boardoids are made in six grades: matte smooth, cream smooth, glossy, linique, antique white, antique cream. For prices, apply to the sole U. S. agent, J. L. Lewis, 522 Sixth Ave., New York.

Flashlights by Victor Methods

Two advertisements elsewhere in these pages describe methods by which successful flashlights may be obtained. The line of well-known flashlight-specialties manufactured by Jas. H. Smith & Sons Co., of Chicago, covers every need of the amateur or professional, including Actino Flash-Cartridges, the Dependable Flash-Lamp and Bag using Victor Flash-Powder and the Victor Studio Flash-Cabinet for portraiture in the studio. This machine will render any studio absolutely independent of daylight for the making of bust, half or full-length portraits. Send for a descriptive booklet, stating the sort of work you are doing.

An American Convertible Lens

AMONG moderate-cost American lenses the Ilex Three-Focus Convertible stands high. The workmanship is good and the quality of the image soft but clean-cut in definition. There is, of course, a distinct advantage in a three-focus type of lens for varied work, and this one costs only \$30 in 4 x 5 or 3 1/4 x 5 1/2 size. It will be sent on ten days' trial with the understanding that the money will be refunded if not satisfactory.

The Viopticon Fills a Need

THAT there was need of a small-slide stereocopier has been shown by the success of the Viopticon. Although this is veritably a "pocket-edition" stereocopier, it produces an image of the same size and brilliancy as the standard-size instrument. The slides are cheaper to make and cheaper to buy—an object to the amateur camerist. Viopticon stock slides on thousands of interesting subjects may be had at 10 cents each.

Simplified Use of Assur Color-Medium

THE directions for use of the well-known "Assur Coloring-Method" have been further modified by a change in the instructions for the use of color-medium. Formerly it was stated that "a small quantity of the desired color is taken and rubbed up on the palette with but very little color-medium." Absolute uniformity was impossible, because one could not be certain of the quantity taken up at different times. This difficulty is now entirely overcome, absolute uniformity is assured and the manipulation is much simplified by the following method:

In about 1 1/2 ounces of turpentine dissolve about 60-100 drops of color-medium and use this solution for mixing the colors. The linen is wrapped around the index-finger and dipped into this solution. The color is then taken up and thoroughly rubbed up on the palette and applied to the photograph with a circular motion.

For washing-in clouds or highlights, pure turpentine should be used.

New Instanto Circulars

FROM The Photo-Products Company, 6100 La Salle St., Chicago, Ill., come two very interesting circulars which have been prepared for the amateur trade. One, "What Others Think of Instanto," gives the opinion of several users of this popular and inexpensive developing-paper and tells about the special introductory trial-offers. It also gives the prices on the new developer and acid-hypo packages prepared particularly for Instanto. The other circular, "Your Questions Answered," anticipates the numerous questions which might arise in the amateur's mind, being unaccustomed to buy direct from the factory.

We understand that these circulars are to be mailed to all Instanto users. If you are not acquainted with the merits of this remarkable paper, it would be well to ask for these circulars, or, better still, send 25 cents for three sample-dozens as mentioned in the advertisement in this issue. Your quarter will be returned if you are not satisfied, and an extra one besides.

Two New Printing-Papers

THE year 1914 promises to be productive of many additions to the already long list of photographic products from which the enterprising camerist may choose. The printing-paper field seems to be particularly active. Already two new papers have appeared prominently on the market. Ansco Company offers Cykoro, a paper yielding a great variety of tones, and Willis & Clements are prepared to furnish their long-expected product, Satista, a platinum and silver paper.

Satista

THIS is a new daylight-printing paper of unusual rapidity, yielding results scarcely distinguishable from the well-known Platinotype, and at much lower cost. As a daylight paper it is unusually rapid, normal negatives requiring one-half to three minutes in bright sunlight or about five minutes on cloudy days. The coating contains silver as well as platinum salts and so is sensitive enough to be printed conveniently by a strong artificial light, such as an electric arc.

Satista produces prints of great beauty and permanence in two tones — black and warm black; they are of artistic quality, luminous and full of atmosphere, with clear and sparkling blacks, rich and transparent shadows. The paper as well as the developer, clearing- and fixing-chemicals are inexpensive, and no toning is required. The manipulation is simple and to those who know the Platinotype process it will seem familiar. Satista is exposed until a faint grayish image shows detail in all but the highest lights. It is developed for half a minute in a developer made up of Satista Salts containing potassium oxalate and oxalic acid, cleared in two baths of potassium binoxalate, washed for ten minutes, fixed in a hypo bath and finally washed in running water for three-quarters of an hour. Warm black tones may be had by the addition of mercuric chloride to the developer and using at a temperature of 140 degrees. Prints may be dried between blotters under pressure, or in any other convenient way. They lie flat and are enhanced in beauty if hot-pressed or dry-mounted.

Cykoro

THIS new developing-paper yields rich, beautiful and varied tones, and is adapted to high-class studio-work. Cykoro means gold Cyko, and was so named because of the characteristic gold tone-effects obtainable with this entirely new product. It will produce in a simple, direct manner those effects and that range of color-tones which heretofore have been obtainable only with difficulty and uncertain permanence.

A slow-printing paper having great latitude in exposure, Cykoro develops at once to a brilliant tone, and to judge the color properly it should be developed in a white light, such as a 16 candle-power electric bulb at a safe distance. For printing, a pair of 100-watt tungstens, a Nernst or Cooper-Hewitt lamp is desirable.

The tones obtainable are, in order, deep green, olive green, warm olive, cool sepia, sepia and red chalk. The deep green requires the shortest exposure and the most concentrated developer, and as the tones increase in warmth the exposure is correspondingly increased, while the hydroquinone developer is proportionately diluted. Normal development is from 1 to 1½ minutes, except for red chalk, which is about 2 minutes. Prints intended for gold toning are passed through an acetic acid short-stop, otherwise directly into an acid-alum fixing-bath.

Toning requires 5 to 10 minutes, and the bath contains a relatively small quantity of gold. It is, in

reality, not so much a toning-bath as it is a bath to fix the color of the developed prints. From the toning-bath the prints are transferred to the acid-alum fixing-bath for fifteen minutes, and finally washed in running water for one hour.

The Marion Record Plate

THROUGH the courtesy of the importers, Allison & Hadaway, New York City, it was the writer's pleasure last month to expose a sample box of Marion Record Plates. As the rating of 500 H. & D. would place this plate in Class 1/3 of the PHOTO-ERA list of plate-speeds, a test was made on this basis. The week before, a trial had shown that on a film and also a plate in Class 1 an exposure of three seconds at F/6 was correct for a window-portrait at home, and so one second exposure was tried on the Marion Record Plates for the same subject. The results were fully timed and of splendid quality — well-balanced gradation, rich in silver, clean-cut in definition, free from fog and fine in grain. A better plate for portrait-work in dark weather or high-speed work could hardly be wished for.

Ernemann Cameras

THE Meyer Camera & Instrument Company, importer of cameras and photographic specialties, desires to inform its friends that it still has a large supply of directly-imported Ernemann cameras which it is prepared to dispose of to all those who desire a good camera of foreign manufacture.

The Mayer Camera & Instrument Company has met with exceptional success in the sale of imported Polygon cameras fitted with Rietzschel Double Anastigmat lenses. This camera is included in the class known as miniature cameras, thus actually fitting a vest-pocket, and, in spite of its small size, it is remarkable for its superb workmanship and absolute efficiency.

The same style and quality of cameras can be had in sizes up to 5 x 7, at prices to suit everybody in the market for a high-grade camera.

Montauk Bromide Paper

FOR enlargements and soft contact-prints this paper is excellent and the splendid quality of its tones exceptional. It is made in nine surfaces, including buff and double-weight stock. A sample package of this paper will gladly be sent free of charge to PHOTO-ERA readers upon application by letter to G. Gennert, 24 East 13th St., New York; 320 So. Wabash Ave., Chicago; 682 Mission St., San Francisco.

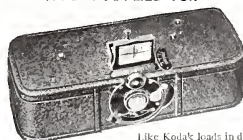
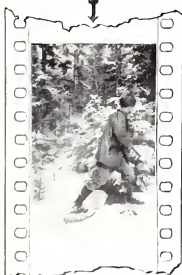
Korona Folding Studio-Stand

THE original model was invented by an expert home-photographer who found the need for a light, portable and rigid stand which would do the work of a regular studio-stand. The original was improved by the Gundlach-Manhattan Optical Co. and the stand we describe was finally evolved. It is a tripod with three legs opening simultaneously and not closing again until desired. When set up, the stand may be moved around and will slide smoothly over any kind of floor. It cannot be upset accidentally and is just as safe on a tile floor as on a carpet. The center-post is adjustable for height from 31 to 45 inches and the tilting top is adjustable for inclination. It is perfectly rigid and will carry an 8 x 10 camera as easily as a smaller size. The wood-work is made of cherry, finished in walnut and the metal parts are aluminum. It weighs 5½ pounds and its maximum height is 53 inches.

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Are you aware of its superiority?
9 grades — One price
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Simplex 400 MULTI-EXPOSURE CAMERA 800

**400
EXPOSURES
THIS SIZE**



Like Kodak's loads in daylight, 16 exposures cost 3/4c for film. Fitted with I. C. Tessar F. 3. 5. Anastigmat lens in No. 60 Compound Shutter. A Pocket Camera of greatest capacity and efficiency for travelers, sportsmen, explorers, tourists, and amateur photographers; perfect in every photographic essential. 50 foot cartridge of Eastman Standard perforated motion picture film taking 8.0 exposures furnished with each camera. Additional cartridges sold by all dealers. A simple device enables you to secure double size pictures. Exposed portion of film may be removed, developed and printed on paper at a trifling cost. Subjects of special interest enlarge with sharp detail to 8x10 or 11x14. Positive films may be printed for lantern projection.

Constructed of highest grade aluminum, brass and nickel-steel, handsomely finished, leather covered; fitted with direct view finder, focusing scale, tripod sockets, exposure counter, etc. Fits the pocket. Simple of operation and always "Ready to Shoot." Camera, 7 in. long, 3 in. wide, 2 in. high may be used for projection or enlarging.
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BIND PHOTO-ERA YOURSELF with a Big Ben Binder, the simplest binder made. If you bind your magazines every month upon receiving them, they will not be lost or mutilated. PHOTO-ERA will always be ready for reference in the form of a handsomely bound book. You can find what you want quickly. Each binder holds twelve copies and to bind them is as simple as to file letters. Price, \$1.00 postpaid.

THE WELCOME PHOTOGRAPHIC EXPOSURE-RECORD AND DIARY, 1914. A complete manual of all printing-processes, developing, intensifying, reducing, etc. Full and extremely helpful treatise on exposure in all conditions, including photography at night, interiors, copying and enlarging. The exposure-calculator makes failure impossible. Postpaid for 50 cents. PHOTO-ERA, 383 Boylston St., Boston, Mass.

HELP WANTED

A MIDDLE-AGED MAN who has had extensive experience in the sale of photographic goods. One who has executive ability and is capable of taking charge and directing the largest amateur department in Canada. State age, experience, give references and salary desired. THE TOFLEY COMPANY, Ottawa, Canada.

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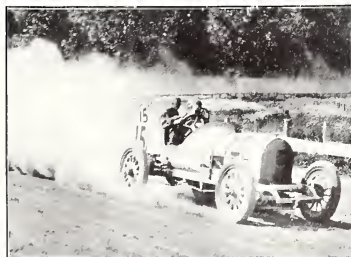
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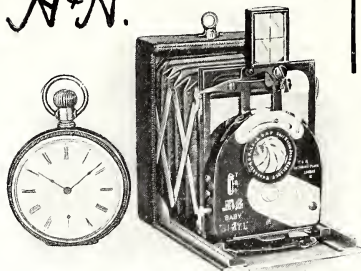
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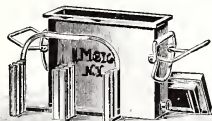
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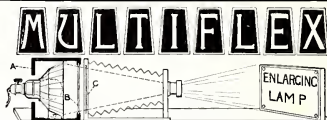
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The American Journal of Photography

Vol. XXXII

APRIL, 1914

No. 4

PUBLISHED MONTHLY BY WILFRED A. FRENCH, 383 BOYLSTON STREET, BOSTON, U. S. A. Entered as Second-Class Matter June 30, 1908, at the Post-Office, Boston, under the act of March 3, 1879.

YEARLY SUBSCRIPTION-RATES

United States and Mexico, \$1.50 postpaid. Single copy, 15 cents.
Canadian subscription, \$1.85 postpaid. Single copy, 20 cents.

Foreign subscription, \$2.25 postpaid. Single copy, 1 shilling.
Agents for Great Britain, Houghtons, Ltd., London.

ADVERTISING-RATES ON APPLICATION

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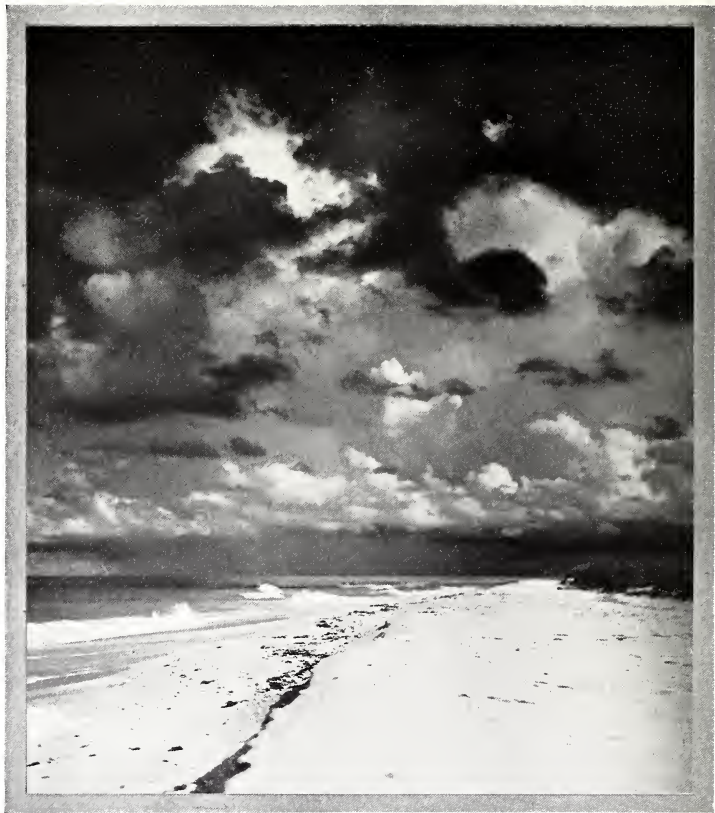
CONTENTS

ILLUSTRATIONS

Canoeing under Florida Skies	Julian A. Dimock	Cover
A Striking Florida Cloud-Effect	Julian A. Dimock	160
The Singer Tower	Alexander Buhle	168
In Blossom-Time	William S. Davis	169
April Afternoon	William S. Davis	170
Willows in Springtime	William S. Davis	170
A Foggy Vista	William S. Davis	171
May Evening	William S. Davis	172
Knitting	W. C. Odiorne	173
Down South with a Baby Sibyl	Jno. W. Allison	174
A Baby Sibyl in Nuremberg	F. O. Butler	174
Ensignette-Views	W. K. Menns	175
The Last Three Soldiers	John W. Gillies	176
The Story	John W. Gillies	177
The End of the Story	John W. Gillies	177
At the Fair	S. I. Carpenter	178
V. P. Kodak-Work	S. I. Carpenter	178
Pensive	Elias Goldensky	179
"I've found your nest"	Harry G. Phister	180
Study of a Head	Harry D. Willard	181
Pastoral	J. H. Goro	183
Foxglove	Katherine Bingham	186
Afternoon-Tea — First Prize, Home-Scenes	Miss Charles S. Hayden	187
For Apple-Sauce — Second Prize, Home-Scenes	Will G. Hebrigg	188
The Festful Hour — Third Prize, Home-Scenes	Dr. F. F. Sornberger	189
Six-O'Clock Tea — Honorable Mention, Home-Scenes	Charles H. Partington	190
"Good Morning" — Honorable Mention, Home-Scenes	John O. Scudler	190
The Creek — First Prize, Beginners' Contest	W. Hardyck, Jr.	193
Brook-Scene in Winter — Second Prize, Beginners' Contest	Marshall Fowler	193
The Prospector — Honorable Mention, Beginners' Contest	E. D. Leppert	194
Woodland-Sunshine — Third Prize, Beginners' Contest	L. Vinton Richard	195

ARTICLES

Camera-Work in Florida (Illustrations by the Author) ..	Julian A. Dimock	161
The Value of a Snapshot	A. H. Beardsley	168
Spring-Landscapes as Camera-Subjects	William S. Davis	169
The Choice and Use of a Miniature-Camera — Part I ..	C. H. Claudy	174
Children and the Camera-Habit ..	Albert Hubbard	180
The Gummist (A Poem)	Edward H. Weston	182



A STRIKING FLORIDA CLOUD-EFFECT
JULIAN A. DIMOCK



PHOTO-ERA

The American Journal of Photography

Vol. XXXII

APRIL, 1914

No. 4



COCOA-PALMS AT MARCO

JULIAN A. DIMOCK

Camera-Work in Florida

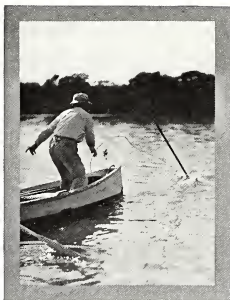
JULIAN A. DIMOCK

THE Peninsular State offers a wide range of opportunity for the man with a camera. There are more kinds of landscapes and water-scenes and a larger variety of fauna and flora than is offered to him in any other section of the country. However, the very range of subjects makes it difficult to obtain good technique and proper feeling, for the contrasts are extreme.

Mental gymnastics are required to figure out the correct exposures. Almost without moving my tripod I once made two exposures. One was given several seconds and was ruinously underexposed; the other was allowed but $\frac{1}{400}$ second, but was flat from overexposure. Probably the difference should have been five thousand to one. This was not due entirely to the value of the light, for in one I used a slow Isochromatic plate, with ray-filter and lens stopped down, whereas on the other a Cramer Crown plate was exposed, with the lens wide open.

Summer is the heyday of the South. Then appear the wonderful cloud-effects, quick-gathering squalls, deluges of rain falling in curtain-like masses, while fish and game are at the height of their activities. The tourist is absent, but the tourist does not fit the landscape and the truth-picturing camera-man need not worry over his absence.

The lessons in cloud-photography alone which come with summer-work in Florida are well worth the time spent there. The effects before the camera are so striking, so gorgeous, that one is impelled to emphasize their value on his plate. He learns to adapt his tools to this emphasis and the results will follow him wherever he goes. Always, thereafter, will striking cloud-work be his. A good technical worker would be horrified at some of the results; but, after all, good technique is not the whole of the game. I would rather get a result true to life than one which is merely good photography. When an



HARPOONING A SAWFISH

JULIAN A. DIMOCK

old hunter told me that a certain alligator-picture of mine was so natural that he "almost took down his gun when he saw it," he gave me more pleasure than could the art-critic with his honeyed words of praise.

Clouds are a most important adjunct to a picture. They frame it; they fill in chinks; they make bare spaces of glaring white paper attractive. They may be used to balance a composition, to draw the attention to a certain spot in the picture or to lessen emphasis on some particular feature. With such a wealth of

this material as the South affords, it is no marvel that one goes "cloud-crazy" and breaks all rules concerning the depth of ray-filters for certain brands of plates. I never know until I get a finished print whether I am trying to make a cloud-picture with trees or figures as accessories or trying to make portraits and landscapes with clouds in the background! It keeps me wondering whether I am a landscape-photographer or a portrait-camerist. This is by way of being a confession, for it is improper; but it opens up undreamed-of opportunities. The indecision must not show in the exhibited print, however. Before you

show *that*, you must be sure in your own mind and have toned up or toned down the different parts of the picture to make clear whether the plate was exposed for the sake of the clouds or the landscape!

Palm-trees are so well suited to photography that one wonders whether they were not created for this special purpose. The tall, straight, bunch-headed palmetto and the drooping cocoa- and date-palms are alike capable of making pictures by themselves. The great live-oak draped with Spanish moss, the tall cypress with lace-



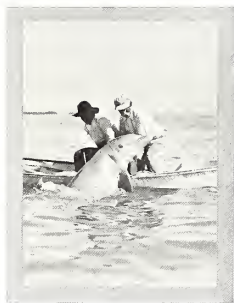
THE FIGHT IS ON

JULIAN A. DIMOCK



THE CHASE OF THE DOLPHIN

JULIAN A. DIMOCK



like foliage, the pine-forests arranged with park-like uniformity lend themselves to picture-making. Thorned century-plants, prickly cacti and tangled masses of hanging vines provide relief from monotony, and meadows of waving grass, beaches of sparkling sand and bayous of clear water make a feast for the pictorialist.

With a long seacoast, a multitude of lakes, the Big Cypress Swamp and the legendary Everglades, the state is well supplied with water-views. Birds, reptiles, fish and animals all lend beauty and interest to the country, and the small rem-

nant of the Seminole Indians, in picturesque garb, may be utilized by the camera-worker in a great variety of ways.

Whenever it appears, the human figure is the keynote of the picture. It tells the tale of place and season; it portrays pain or pleasure; it creates in the beholder a vital interest. He can project himself into the environment and so get a tangible emotion. It creates in him a definite desire, a wish to be there, possibly, or a thankfulness that he is not. It is the effect upon the photographer's own mind which he must try to

make his picture tell. As he is successful in this, so is he as a pictorialist. The balmy sunshine of the Southland puts energy and gymnastics at a discount. They do not fit the place; they cannot convey the idea of warmth and contentment. If, then, you introduce figures, be sure that they express your idea of the region.

The drooping, waving fronds of the cocoa-palm belong to dreams, to noon-time siestas and to the wooing of pretty girls. A tailor-made society matron or a well-groomed New York broker are out of place in such a picture; they make a very undesirable discord.

The floating gardens of water-hyacinth sug-



AGAIN THE TARPON LEAPED

JULIAN A. DIMOCK



IN THE BIG CYPRESS

JULIAN A. DIMOCK

gest the lazily-drifting canoe, whereas the sloughs of the Everglades belong to the dug-out of the Seminoles. The spitting motor-boat is an abomination in these regions of brilliant flowers, sun-kissed waters and waving seas of sawgrass.

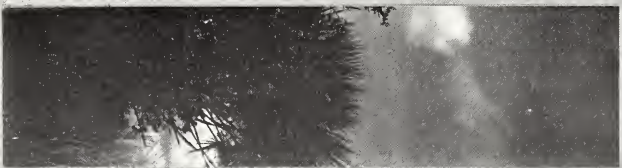
The treatment of Florida sports is another story. It is sport, and not Florida, which must be emphasized. Action, danger, rivalry, the fray, are the essentials. The hunter must tramp the woods, the prairies, and penetrate the jungles. The fisherman must seek the denizen of the deep in an open boat, fight him to a finish and win the combat by force of superior brawn and brain. A six-foot tarpon leaping over a small boat furnishes plenty of excitement and sufficient danger to awaken the most blasé fisherman. See to it, then, that your picture catches this excitement. Vigor and action must be portrayed or the picture fails in truth.

These are a few of the features of Florida available to the man who would take pictures with a camera. They are not to be found everywhere and they are not always in photographic garb. Often they come to you at curious times and in unexpected places. I

have spent weeks in the Big Cypress Swamp; yet the best specimen of the cypress for photographic purposes which I have ever seen is on the St. John's River in sight from the railroad. Before I learned that clouds *must* enter into every view of the Everglades, I exposed dozens of plates in that mysterious region only to throw them away. I have penetrated the wilderness and camped on the ground for months, only to see the first specimen of the alligator tribe within a mile of the end of the railroad on my return to civilization.

My own work has always been away from the haunts of fashion and big hotels, so I do not speak of the vast caravansaries with their crowds of tourists, their golf-courses and costly grounds, or yachts in shining white anchored in groups before the hotels and near the fishing-grounds; but these, too, abound.

Thousands of plates exposed in Florida have taught me some technique, but they have drilled into me the importance of keeping the scene in harmony. The particular brand of plates used, the amount of exposure given, the proportions of the different ingredients in the developer, are



PETICANS AND GULLS FLY ALONG THE BEACHES



THE FLORIDA SURF IS GLORIOUS FOR CANOEING
 A SEMINOLE OF THE EVERGLADES
 WATER-HYACINTHS IN A FLORIDA RIVER
 JULIAN A. DIMOCK



of little importance. These are matters of personal preference and experience. I would rather have my old familiar lens and plates than to try unknown makes even if I knew the others to be peculiarly adapted to the work in hand.

Every worker with a camera has his own method. With my camera I try to bring the different elements of the scene together, making them living, breathing, sentient things, forcing thought, feeling and soul into each object, animate or inanimate. Does a single old palm-tree loom up as the principal feature of the scene? Then decide whether he is a curmudgeonly old fellow who abhors human companionship, or whether he longs to shelter a frolicking band of youngsters beneath his branches. Does he bend to the storm or, stand-



BECALMED ON THE BAY OF FLORIDA

JULIAN A. DIMOCK

ing straight and unyielding, defy the tempest? You must decide in your own mind whether he is a fighter who will stand up and take the buffeting of the wind and weather, or a weakling who will bow to them. *Then*, having decided, go about a way to show it in your picture. Show it by surround-

ings, by the figures in the picture, or in any other way that comes to hand. Maybe a piratical old salt may show the one and a little child the other.

The knowledge of the subject comes only with acquaintance, unless you are one of those fortunates who can "sense" the inwardness of things on introduction. You must throw yourself into the scene, live in it and with it and find out what it means to you before you can portray it successfully.



THE EVERGLADES FROM A TREETOP

JULIAN A. DIMOCK

The Value of a Snapshot

A. H. BEARDSLEY

MUCH is written about composition and photographic processes relating to the work of the pictorial and portrait photographer. Many there be to prepare technical magazine-articles of value to advanced camerists and to write glowing appreciations of the photographs by these workers, but few there be to sing in praise of the humble achievements of the "everyday snapshotter." The result of this neglect is shown in the attitude which many of us assume toward the proud possessor of a Brownie, Ansco V. P., Buster Brown, or other tiny camera and the resulting snapshots.

Beautiful pictures made by artists of world-renowned ability delight us and offer intellectual pleasure to all; but a spontaneous little snapshot of the baby playing on the beach grips the heart. True, the baby may be sitting squarely in the center of the picture, the line of breakers may extend across the background as straight as if drawn by rule, and some bystander's foot may encroach upon one corner of the picture; yet, faulty as it is, *this* is the picture to be treasured.

Admitting all the unpardonable errors to be found in the ordinary snapshot, we are, nevertheless, confronted with the fact that it is *true* to the subject and appears so to us; it is a characteristic likeness. In short, snapshots depict us as we are and in our own environment. The same statement applies to landscapes and glimpses of places dear to us through association. There seems to be too much delving into technicalities and not enough honest admission of the vital interest that a little snapshot holds for us.

It must not be assumed that the writer is not in sympathy with the artistic expression of our photographic workers. His contention is that the humble "fireside" snapshot is lost in a maze of unfathomable photographic platitudes which do not give it the position it deserves. By all means let us always have and enjoy the beautiful expressions of artistic minds, but let us endeavor to obtain a little closer relationship between these expressions and those which appeal to the "average" individual. Unless the intellectual is made to appeal to the heart, it loses its value and becomes cold and metallic.

Some years ago the writer, then the happy owner of a Brownie camera, spent the summer with his mother among the beautiful Berkshire Hills. The camera, being a new acquisition, was used without stint by all the members of the family. There was much kindly fun poked

at the writer because of his insatiable desire to photograph anyone and anything at every possible opportunity. That summer was destined to be the last with his mother. To-day those snapshots taken of her, surrounded by those she loved and by those who loved her, constitute a more sincerely beautiful series of pictures than any that might have been made by the most talented artist. No matter how highly we are developed artistically, or to what heights of culture our art has brought us, such home-pictures have a right to be ranked with the highest in the opinion of humanity as a whole. Such pictures are entered in no salon, they are forwarded to no competitions and they are rarely shown, but their value to those who made them and to relatives and friends is above price.



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THE SINGER TOWER

ALEXANDER BUHLE

Spring-Landscapes as Camera-Subjects

WILLIAM S. DAVIS

DURING the varied days of springtime unusually good opportunities are constantly presented to do landscape-work. Not only are the atmospheric conditions often favorable, but the changes in foliage-effects most rapid and striking as the season advances, thus affording great diversity of subject-matter within a few weeks.

The range of contrasts presented is less than is usually seen either earlier or later in the year — both snow-scenes and summer-foliage in sunshine showing a far greater difference between highlights and shadows — therefore it is easier to obtain good tonal values, providing, of course, that reasonable care be taken in the matter of exposure and development.

While the atmosphere is sometimes very clear, particularly on a breezy day, the prevailing, and consequently most characteristic, aerial quality of this period is softness, due to the moisture that is constantly being drawn from the woods and fields by the increasing warmth of the sun's rays. This pervading limpid quality — more intangible than ordinary fog or mist — seems to possess a high refractive power, with the result that hard edges of objects are softened while the shadows also become more luminous. Then, too, it is well to notice the variations which occur in the color of the atmosphere, which on some days (generally preceding rain) is almost white or a pearly gray near mid-day, changing usually to a yellow as the afternoon advances: whereas at other times it takes on a violet or blue-gray tint. This latter tint

is most strikingly brought out when seen in connection with a white building in sunshine, or by contrast with light yellow-green foliage which, at times, appears lighter than the sky. Although the average photographer may not be particularly interested in color, as such, still the variations just mentioned should be noted, as they

alter the tonal relations of all the elements composing a landscape, and to obtain adequate translation into monochrome some difference in treatment is necessary, this being easy enough if one only takes the trouble before making an exposure to classify the effect, and then apply the technical treatment needed.

So far I have not mentioned possibilities which are more frequent in spring, particularly near the seacoast, to obtain interesting fog-and mist-studies: but as such effects often give an air of mystery and charm to what may under ordinary conditions really appear commonplace, they should not be passed by. The subduing-action produced by an atmospheric screen of this kind furnishes the photographer with the means to give emphasis to a good foreground

and, even far more important, either to soften or to blot out a distracting background.

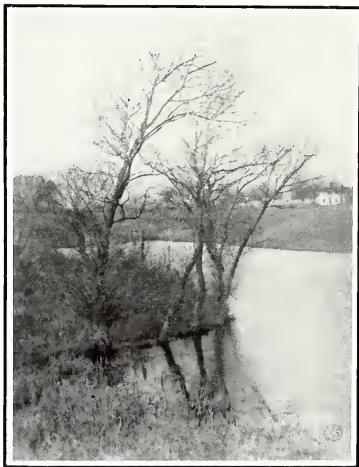
If one wishes to add still greater variety to a collection, charming moonrise-studies are possible, the bare branches or delicate new foliage giving a lightness and grace to the landscape particularly effective in some compositions.

By starting in early April, the nature-student may obtain studies which show most clearly the structure of the various trees, followed later by



IN BLOSSOM-TIME

WILLIAM S. DAVIS



APRIL AFTERNOON

WILLIAM S. DAVIS

more at short intervals as the leaves and blossoms make their appearance. The same thing also holds good for plants and flowers found in the woods and by country-roads, as they are never more interesting than during this period of transformation.

Take, for instance, the ferns, which appear first as little pale-green, knob-like projections among the leaf-mold near trees, then shoot up several inches while still curled up tightly and, at last, on some warm day expand rapidly into the beautiful wavy fronds with which all of us are familiar.

Considered from the standpoint of pictorial composition, the greatest care necessary in spring-work is to avoid a harsh, scratchy line-effect, which is more likely to occur on account of the prominence of bare branches and

twigs seen against the open sky. If all the trees are in the middle-distance, the branches seen thus *en masse* may show a superb quality of lace-like delicacy that is highly pleasing, but where a foreground-study of a single tree or clump, like "Willows in Springtime," is attempted, the matter becomes more difficult. In such a case the best results are likely to be obtained by working on a hazy day with the light largely upon the subject, and giving a full exposure to lessen still further the contrast between tree-branches and sky; for the shorter the scale of tones can be kept without producing monotonous flatness the better, as it is by such means that the feeling of light enveloping objects is produced.

The question of diffusion *versus* sharpness in focus depends much upon the effect or impression one wishes to produce. As a general thing, however, a scene in which all the trees are in the middle-distance will stand fairly sharp definition, as the individual branches of trees as distant as these are not large enough to cause confusing lines, but the case is somewhat different when the interest lies in the immediate foreground; for, it being an accepted fact that two stories cannot be told successfully in one picture, it seems no more than reasonable to concentrate interest upon some one plane of the subject when the rendering of perspective plays an important part in a composition, and the best way to obtain this differentiation of planes is by variation of definition in combination with a flattening of tones in the receding portions.



WILLOWS IN SPRINGTIME

WILLIAM S. DAVIS

In "Willows in Springtime," for example, it will be noticed that the sharpest focus is upon the tree-trunks in the foreground, whereas the background is quite diffused, as otherwise the numerous lines produced by distant trees would have been too insistent. Where it is desirable to make the most of a soft atmospheric effect or increase the elusive quality in a night-scene, for instance, it is sometimes well to throw every part more or less out of sharp focus, or else to use a lens designed to give soft definition. Considerable softness may be obtained without unpleasant blurring in any part by stopping down an ordinary lens and then racking it out beyond the normal position at which it would usually be placed for the nearest objects included.

On general principles I always advocate color-sensitive plates or films for landscape-work, and all the accompanying pictures were made in this manner, with the exception of "Willows in Springtime," which was taken some years ago on an ordinary slow landscape-plate. While it is possible to obtain very good results in some cases upon such plates, it is far easier to make sure to get soft gradations and good values when rapid color-sensitive plates are used, and it is still better to have those of the non-halation variety, particularly when working in the woods.

If a full exposure is given and development stopped soon enough, it is possible in many cases to dispense with a ray-filter. However, when delicate clouds are present, or it is essential to preserve very accurately the relative values in such effects as previously mentioned of

light objects or pale green foliage against a blue-gray sky, one is certainly required, although it should not be strong enough to cause over-correction. A three- or four-times filter is deep enough. The need of a filter is felt more often as the season advances, and the color of the foliage has to be cared for, but when in doubt at any time, it is safe to use one.

Those who feel uncertain about the proper exposures to give will find more information than could be given here by consulting the PHOTO-ERA Exposure-Guide, or a good meter



A FOGGY VISTA

WILLIAM S. DAVIS

in which sensitive paper is used to test the actinic strength of the light, such as the Wynne or Watkins. Full data regarding my illustrations will be found in the proper department, so no further reference to the exposures for ordinary daylight-subjects will be made here except to caution beginners who rely upon tables requiring personal judgment as to power of light not to be deceived by the apparent brightness of sunshine on hazy afternoons, for under such conditions the light is more yellow, and consequently weak in actinic strength, making it necessary to give several times the usual exposure.

As afterglow- and moonlight-subjects are in classes by themselves, the matter of exposure must to a great extent be settled by trials, for the time required depends both upon the amount of detail it is thought essential to have in the shadows, and the quantity of diffused daylight which may still be present when the exposure is made. I obtained one afterglow with dark cedars nearby on a hazy April evening, fifteen minutes after sunset, with an exposure of sixty seconds, stop F/8, and a four-times filter on

the lens. The negative contained some detail in the shadows, but, being weak, had to be held back when printing to allow the sky to come out properly.

A fair average for moonlights, using stop F/8, and fast plates, is twenty to thirty minutes, without a ray-filter. If one wishes to obtain an early moonrise, while some daylight yet remains, the time can be cut down considerably and more detail obtained in the shadows. In all cases, naturally, care must be taken to exclude the moon during the long exposure needed for the landscape, but this may afterward be brought into the desired position on the focusing-screen and a short exposure—say ten to twenty seconds—given; or, if preferred, the moon may be taken on a separate plate, which is afterward placed back of the landscape-negative. To make the moon appear more in keeping with our visual impression of its size, a longer-focus lens is desirable; but if it is not convenient to use one, the size of the image may to some extent be increased by racking out the regular lens an inch or so beyond the normal before exposing for the moon.



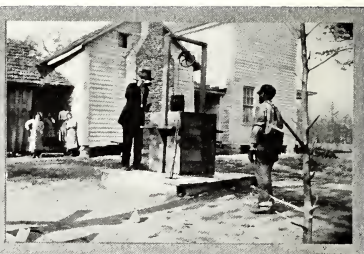


KNITTING
W. C. ODIORNE





DOWN SOUTH WITH A BABY SIBYL



JNO. W. ALLISON

The Choice and Use of a Miniature-Camera

In Three Parts — Part I

C. H. CLAUDY

MINIATURE-CAMERAS — by which term is meant instruments which actually fit the pocket and are small enough to be so carried without inconvenience — have come to stay. It is true that the large, plate-camera, with its heavy paraphernalia of tripod, plate-holders, carrying-cases, extra lenses, focusing-cloth, etc., will always have a field. But the pictorial and the record-photographer are coming more and more to the conclusion that the instrument which causes the least effort to carry, the least effort to use, is the least bulky, weighty, complicated, is best adapted to most of the many varieties of photographic work afield. The process of enlargement is so simple, and the quality of negative yielded by lenses of short focus is so good, that the last objection — the minute size of pictures — has been eliminated from consideration.

To choose such an instrument is not easy, because most of those which have won popular-

ity are made abroad, and few photographers have the time, or, having the time, the opportunity, to visit a sufficient number of dealers to see all the many attractive models offered for his consideration. Realizing this, the editor of PHOTO-EKA requested that a representative selection

of such cameras be placed in my hands for comparison and description, believing that the resulting article would be of value to those in the market for pocket-cameras.

The question as to whether films or plates are best for instruments of pocket-size cannot be answered authoritatively by any one, save as his personal opinion

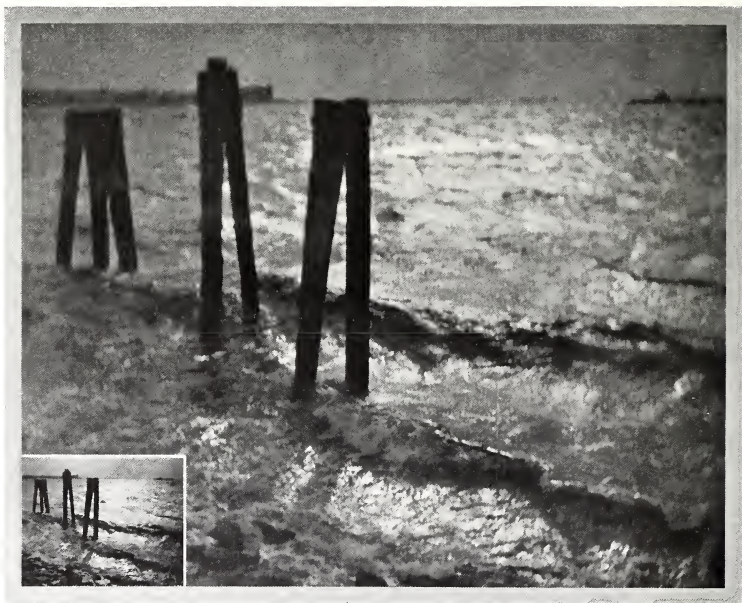
may be in favor of one or the other. The objection often urged to plates — that they are heavy, cumbersome and bulky — hardly obtains in the case of the small camera. Half a dozen plate-holders, filled, containing $1\frac{1}{2}$ x $2\frac{1}{2}$ -inch plates, do not weigh more than ten or twelve ounces. On the other hand, the ease of handling plates in the darkroom, often



A BABY SIBYL IN NUREMBERG

F. O. BUTLER





THE LAST THREE SOLDIERS (ICARETTE)

JOHN W. GILLIES

quoted as one of the advantages over films, is not so manifest in small sizes, and the question of rabbet-edge and its possible frilling takes on larger proportions the smaller the area of the negative. Nor is the matter of expense to be urged against films in favor of plates, as is often done in the larger sizes, for the small rolls are so inexpensive as hardly to figure in an afternoon's holiday expense. The plate-camera — be it vest-pocket or huge view — requires plate-holders, and the small-size vest-pocket plate-camera, as against that of its brother film-camera, is more than made up by the increased bulk of half a dozen or more plate-holders. The film-camera is self-contained, but the plate-camera must needs come in several parts. On the other hand, again, the plate-camera permits focusing on a ground-glass and composition under the cloth, which the film-camera does not, and yet, once more, material for a hundred film-exposures can be carried and still not weight the pocket, while a hundred plate-holders, even

of pocket-size, would, with their contents, be a little unhandy. It is entirely a matter of personal choice; but in justice to the photographic objection to films, that they do not always lie flat, it can certainly be said that the small-size film which shows buckling has yet to be reported.

In the following paragraphs will be found brief descriptive comments of ten miniature-cameras, none of which makes negatives more than 3 inches long. Four of the cameras are fitted for films and six for plates. All have anastigmat lenses, and none can be considered a beginners' instrument. To the best of my ability I have eliminated personal bias in a consideration of these instruments, striving to present their good points without favoritism.

The film-cameras, listed alphabetically, are:

1. The Baby Sibyl.
2. The Ensignette de Luxe, No. 2.
3. The Icarette, No. 195.
4. The Special Vest-Pocket Kodak.

The Baby Sibyl, made by Newman and Guardia, of London, and sold in this country by Allison and Hadaway, of New York, makes negatives $1\frac{3}{8} \times 2\frac{1}{2}$ inches. It has three features which particularly distinguish it — the shutter, the adjustable finder, by which the use of the rising and sliding front is made exact and not guesswork, and the smooth-working focusing-device.

The shutter is one of the "winker" type, in which the shutter-blade is of one piece with a reversed circle-end opening, much like that of the old drop-shutter. It requires setting between each exposure, a cross and circle on each end of the shutter-blade corresponding to a cross and circle on the front of the instrument to which a tiny hand is to be turned for setting. It has the familiar T B I adjustment, works at

THE STORY (ICARETTE)

JOHN W. GILLIES



THE END OF THE STORY (ICARETTE)

JOHN W. GILLIES

speeds ranging from $\frac{1}{2}$ second to $\frac{1}{200}$ second, and the Carl Zeiss F/4.5 Tessar lens of 3-inch focus has, of course, all of the usual diaphragm-openings for many and varied sorts of work. Focusing is accomplished by the sidewise movement of a lever across the bed of the camera in front of the shutter, working by means of a concealed cam, and is exceptionally easy, smooth, accessible and quick. The rising and sliding front, which is friction-held, has movements indicated by arbitrary numbers on a scale. The lens in the collapsible finder is also movable up and down (or from side to side if the finder is reversed) to positions corresponding to the numbers on the rising and sliding front scales, with the result that when this adjustment is made, the finder shows the actual picture area that the camera will give. The finder



AT THE FAIR

S. I. CARPENTER

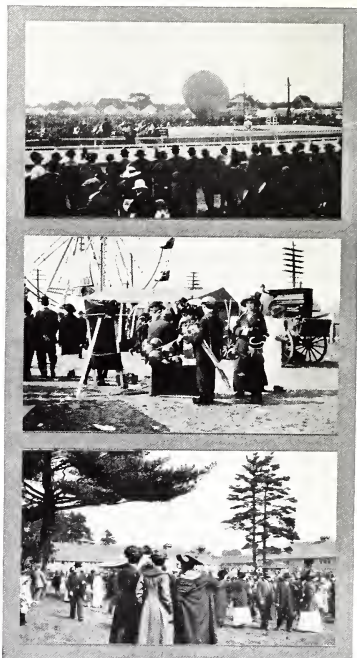
is of the ground-glass, not the brilliant type, and is equipped with two levels. The entire instrument gives evidence of having been carefully and finely made. The films drop into place easily, the back being secured to the camera proper by concealed buttons. Camera and one film weigh one pound. The instrument is $1\frac{1}{8} \times 3\frac{1}{8} \times 6\frac{1}{8}$ inches in size, leather-covered and, when closed, resembles in form the familiar F. P. K.

The Ensignette de Luxe, No. 2, made by Houghtons, Ltd., of London, and sold by G. Gennert, of New York, is an all-metal instrument weighing one pound. It makes negatives 2×3 inches, according to its maker's advertisements. The images it actually yields, however, are $1\frac{7}{8}$ inches wide. It is an extremely compact instrument, of somewhat unusual shape, being $1 \times 2\frac{1}{2} \times 5$ inches in dimensions. It is of the bedless type, the front, when extended, being held rigid upon four projecting arms swinging from the film-box. Focusing is accomplished by moving of the Compound shutter forward and back through the front of the instrument. A knob, sliding in a slit upon one of the ends of the extensible front, permits focusing from 5 feet to infinity.

When the camera is opened, the finder springs automatically to position for landscape-work. To close the camera, it must be swung

over, where it is caught by a spring-catch, but it is not of a type (solid construction, brilliant principle) to be injured if an attempt is made to close the instrument without reversing it. The camera is unusually rigid in its construction, since the lens-front and adjustments are supported from four points and not from one side, as in the case of drop-bed instruments. Its compactness, long slender shape, all-metal, dull black finish, rigidity, ease of focusing and the application of a Zeiss-Tessar lens, F/6.3, $3\frac{1}{2}$ -inch focus, in a Compound shutter to a vest-pocket-instrument, are its best features. It does not accommodate any roll-film but requires special brass-capped Ensign films.

The Icarette, made by Aktiengesellschaft, of Dresden, and sold by the International Photo-Sales Corporation, of New York, is a folding, leather-covered camera, making negatives $2\frac{1}{4}$



V. P. KODAK-WORK

S. I. CARPENTER

inches square. Being square, it avoids all complications of reversible finders, but has, of course, less adaptability than the camera with the oblong film. The instrument is extremely compact and of very strong and rigid construction. It uses a Compound shutter to which is fitted a Hekla anastigmat lens of 3-inch focus working at F/6.8. The diaphragm-lever is not beneath the lens, as is usual in this type of shutter, but is arranged to work by means of a minutely-projecting lever behind the shutter.

Focusing is accomplished by a spring-set lever to the right, the end of which curves over and forms the pointer to the scale. The shutter itself forms the "front-board" of the camera and is provided with a front sliding horizontally but not vertically. A single tripod-socket is so placed in the drop-bed that when the instrument is on a tripod, the movement of the lens and shutter is that of a sliding not a rising front.

The spool-holding arrangements are the acme of simplicity. The new roll drops into its recess without any projections to hold it and unrolls while lying loosely in its recess. The take-up spool is fitted over a foot-projection, and the winding-apparatus hinges back to allow the insertion of the winding-nib. The back locks on by a catch, wisely placed at the end of the camera, where it cannot well be confused with the opening-button. Rigidity, compactness and simplicity are the characteristics of this instrument. It should not go unmentioned that its small size and general compactness are largely due to the "grasshopper" construction of the hinged front, which itself folds as the camera is closed, thus saving the last fraction of an inch of space. It weighs fourteen ounces, is $1\frac{1}{8} \times 2\frac{3}{4} \times 5$ inches in size and leather-covered.

The Special Vest-Pocket Kodak, made by the Eastman Kodak Company, is notable for its absolute simplicity and "fool-proofness." These qualities have been the watchwords in making a camera which would be difficult to injure without deliberate intention. Weighing but ten and one-half ounces with film, $1 \times 2\frac{1}{2} \times 4\frac{7}{8}$ inches in size, and smallest and most compact of any of the instruments here described, it makes what is rapidly becoming the standard negative-size for miniature-cameras — $1\frac{5}{8} \times 2\frac{1}{2}$ inches. The Vest-Pocket Kodak is of all-metal construction with dull-black finish. The front is carried on extensible metal arms of lazy-tong construction, and the instrument is of the non-focusing or fixed-focus type. To open, the front is pulled out until it catches; to close, it is pushed in until it stops.

For film-insertion, the back does not come off at all. Access to the film-chamber is



PENSIVE

ELIAS GOLDENSKY

through the top of the camera, which comes off after a catch is slid to one side. The film-paper end is threaded into the take-up spool before the full spool is inserted in the instrument. Both spools are slid in, end first, at the same time, the paper dropping into the narrow channel reserved for the film, through the edgewise opening at the side, or top, of the camera. The shutter is of the automatic type, needing no setting. The lens is the Zeiss-Kodak anastigmat of $3\frac{1}{2}$ -inch focus, working at F/6.9, or the instrument may be had with merely an achromatic meniscus at a much lower price.

The shutter is provided with the Autotime Scale, making the instrument one particularly suitable for beginners, and removing at once the pet terror of the novice as to what exposure he should give. Although both diaphragm and shutter are marked as usual, they are further provided with descriptive words so that the user may set the one to "brilliant" and the other to "average view" and get an exposure of $\frac{1}{50}$ second at F/16 without further calculation.

(To be continued)



"I'VE FOUND YOU'RE NEST"

HARRY G. PHISTER

Children and the Camera-Habit

ELBERT HUBBARD

THE first requisite in art is to observe. You have to see the separate things, and so my advice to the teacher and parent is—allow your children to get the camera-habit.

Children take to pictures with delight, and once a youngster owns a camera, he is on the lookout for subjects. Wherever he goes, his eyes are wide open for the wonderful, curious, peculiar, beautiful things in Nature.

Once you begin to observe, you find the beautiful, the wondrous, the peculiar and the strange on every side. Get the beautiful in your heart and you will see it reflected everywhere.

The mental attitude of wonder is the one thing, I believe, that differentiates a great man from the mediocre. Wonder leads us to investigate, to search, to study. Without wonder we never get an artist, a poet, an orator, a scientist.

The camera-habit leads to tramps afield; and I hope I do not have to prove that people who

are on good terms with God's beautiful out-of-doors are well and happy all of the time, as we certainly should be. The red cheeks, the bright, clear and lustrous eye, the sweet breath and the innocent laugh—these follow as does night the day, the tramps afield.

A child ten years old is old enough to begin to get the camera-habit. Such a youngster will be interested, delighted, and his sense of wonder will begin to expand. Wherever he goes he will be on the lookout. He will snap pictures of his pets, of the family. Soon he will get an eye for pose and position. He will study the light, the clouds, the sunshine, the movements of things by the wind, and the different appearances of objects at different times of day.

We grow by doing things. It is a great experience to see the picture emerge from the film under the wonderful manipulation of the operator. Any boy or girl who can take pictures can develop them, first in a tank and later



STUDY OF A HEAD

HARRY D. WILLIAR

in a darkroom where he can actually watch and control the process of development. The ownership of a camera and the care of it, and the developing of the pictures, is an education in itself that cannot in this day and generation be overlooked.

Amateur photography is virtually a new thing. We used to think that only a person of great skill and long experience could take pictures. Now, the principal trade in cameras is with the amateur. As an education, the camera is taking its place right alongside of books, and in certain respects it is even more valuable.

The child or man with a camera-habit is no longer an interloper between earth and sky. He is never lonesome, wherever he is, because he feels the kinship that exists between himself and all living things.

Not all parents are interested in the school-work that the children are doing; but all parents are interested in pictures, and thus, through the camera, do the child and the parent learn their

lessons together. And that this cementing of human hearts is good, beautiful and right, all the world agrees. — *Snapshots and Education*.

Rapidity of Observation

THE hand-camera worker is frequently disappointed to find that most of his negatives include various things which he did not see at the moment of making the exposure. This is a difficulty arising very often from the fact that his point of view at the moment of exposing is different from that of the lens. What is needed is rapid and comprehensive observation, and this, though varying with individuals, may be cultivated by practice. It is a good plan to get into the way of sizing up a view as seen, say, from a moving vehicle, and deciding as rapidly as possible whether it is worth a plate, or whether unsatisfactory components would mar the pictorial effect. — *The Amateur Photographer*.

The Gummist

EDWARD H. WESTON

With Apologies to Rudyard Kipling, Author of "The Vampire"

A "gummist" there was and he made his prayer
(Even as you and I!)
To some paint and some gum and a "badger-hair,"
(We called his messing a daub "for fair")
But the "gummist" he called it his "art-work" rare
(Even as you and I!)

*O, the paint we did waste and the "tears" we did waste
And the prints that were always "slammed,"
By "would-be" critics who did not know
(And now we know that they never could know)
And did not understand.*

A "gummist" there was and his coin he spent
(Even as you and I!)
Paper and paint to his last red cent
(While his land-lady dunned him for "past-due" rent)
But a "gummist" must watch "development"
(Even as you and I!)

*O, the stain we got, and the flaky spot
And the bubble we cheerfully damned,
Belong to the day when we didn't know why
The stock-house welcomed our efforts to buy
But now we understand!*

The "gummist" he sweat through his foolish hide
(Even as you and I!)
While the highlights he scrubbed till they almost cried —
(With a bristle-brush none too softly applied)
When the print was "done," friends threw it aside
(Even as you and I!)

*And it isn't the worst that his feelings at first
Should a little calming demand —
It's coming to know that folks never knew why
(Such doping and faking a "gummist" should try)
And never could understand.*



PASTORAL.

In the hands of a master-photographer the gum-process yields the greatest art-works of the camera.

J. H. GARO

EDITORIAL

Tariff Misconceptions

THERE are many people who believe that, because the new tariff is marked by sweeping reductions all along the line, imported articles of foreign manufacture, which under the old tariff were taxed very high, should now be obtained at a much lower price than formerly. This is a serious misconception. Take, for instance, the case of raw wool. Because this product is now imported entirely free of duty, it might be assumed that domestic clothing would be cheaper. This is true only to a certain degree; for the reduction in the price of a good suit of clothes, because of free wool, is less than fifty cents, and on a high-priced suit about seventy-five cents. Free hides, according to economists, were to lower the price of shoes; but it did not work out in that way. On the contrary, the retail-price of this commodity was advanced. The cause of these changes is to be found in a combination of conditions—economics, manufacture and business—too intricate to be explained briefly.

Thus it is that cameras of European manufacture continue to be sold in this country at little or no reduction from prices current during the former tariff, although the import-duty has been changed from *forty-five to fifteen per cent ad valorem*. The buyer of an imported camera, who confidently expects to pay only the current European retail-price plus the present import-duty of fifteen per cent, has made a serious miscalculation and should familiarize himself with the new tariff-law as it affects cameras and photographic lenses of foreign production. If he be a practical business-man, he should know that the retail price of an imported article is fixed after a careful consideration of the entire cost of importation and all the expenses which enter into the management of the business. If the customer be dissatisfied with the price which the dealer asks for an imported camera, let him personally go to the trouble to import it from Europe. First he will be obliged to ascertain the net price from his European source of supply and send the entire amount with the order, he himself assuming all the risk from the moment the shipment leaves the hands of the consignor. After he shall have paid all the charges of transportation, the import-duty—which, however, may not be fifteen per cent—and the fee

to the custom-house broker, he will find that the camera has cost him considerably more than what he would have paid the dealer for the exact duplicate. Moreover, if anything should be wrong with the equipment, a long and vexatious correspondence with the European exporter would be the inevitable result. Or it may be, as has often happened, that the foreign manufacturer or dealer will decline to execute the order, return the remittance and refer the purchaser to the American agency. All this involves a loss of time and the use of the money. The purchaser of an imported camera will also discover that when two or more rates of duty are applicable to any imported article, it shall pay duty at the highest of such rates. Hence, in the case of a camera fitted with a lens, the lens pays the highest rate of duty, viz., *twenty-five per cent*, which rate is levied on the cost of the entire equipment. However, a camera without a lens exacts a duty only fifteen per cent.

Stereoscopic Photography

WITH the revived interest in the practice of stereoscopic photography, of which wonderful art the younger generation of photographers knows but little, has come a variety of improvements in the necessary apparatus—stereoscopic cameras of delightful efficiency, compactness and workmanship, and printing-devices of simplified construction. The pleasure of making these stereographs—twin-photographs, on paper or on glass, in which one actually looks around objects and sees them in realistic perspective—has also been enhanced by the application of color-photography in several forms, particularly the autochrome process, which is as fascinating as it is simple. Indeed, the present improved method of making stereographs is one of extreme simplicity as compared to the old-time way; and the photographer, be he amateur or professional, who has had the pleasure to view some of the superb stereographs made by two well-known American firms, must have been filled with a desire to take up the practice of the art. As already stated, the variety of available equipments and appliances for the production of stereographs is large, and the efficiency and construction the acme of human skill. The subject will be treated by an able specialist in an early issue of this magazine.

PHOTO-ERA MONTHLY COMPETITION

For Advanced Photographers

Closing the last day of every month. Address all prints to PHOTO-ERA, Monthly Competition, 383 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. If preferred, the winner of a first prize may have a solid silver cup, of original and artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request. Enclose return-postage in this letter.

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of *stiff* corrugated board, not the flexible kind, or with thin wood-vener. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value. Persons interested to have one of these PHOTO-ERA prize collections shown in their home-city will please communicate with the Editor of PHOTO-ERA.

Awards — Home-Scenes

Closed Jan. 31, 1914

First Prize: Mrs. Charles S. Hayden.

Second Prize: Will G. Helwig.

Third Prize: Dr. F. F. Sornberger.

Honorable Mention: Edna Blackwood, F. E. Brouson, E. G. Dunning, Raffaele Menochio, Leander Miller, Chas. H. Partington, Carl A. Peterson, C. F. Richardsson, John O. Scudder, J. R. Snider.

Special commendation is due the following workers for meritorious prints: Nick Bruehl, Fannie T. Cassidy, Mrs. C. B. Fletcher, Alice F. Foster, John W. Gillies, Harriet T. Goodnow, A. B. Hargett, F. W. Hill, Saisai Itow, E. Keaugh, Hannah Knight, Dr. Rupert S. Lovejoy, S. J. McGaughey, Alexander Murray, Charles E. Pittman, Clark H. Rutter, C. B. Sanford, F. R. Smalley, Albert F. Snyder, Carl Taylor, Alice Willis.

Subjects for Competition

"Foreign Travel." Closes March 31.

"Flashlights." Closes April 30.

"Growing Flowers." Closes May 31.

"Telephoto-Work." Closes June 30.

"Landscapes." Closes July 31.

"Outdoor-Portraits." Closes August 31.

"Waterscapes." Closes September 30.

"Indoor-Portraits." Closes October 31.

"Decorative Applications." Closes November 30.

"My Home." Closes December 31.

"Winter-Scenes." Closes January 31.

"General." Closes February 28.

"Flashlights." Closes March 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the publisher will give them the choice of photographic supplies to the full amount of the prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Growing Flowers — Photo-Era Competition Closing May 31

WHAT greater joy does the year hold than the first trips to the woods when the warm spring-sunshine has begun to work the great, world-old, yet yearly new, miracle of the flowers. How all thoughts of "the cares of this world and the deceitfulness of riches" seem to fall away from our winter-weary brains, and the soft air and warm sunshine seem to revivify us, as well as the trees and flowers.

As we stand and look about us, listening to the "little noiseless noise among the leaves" and smelling the nameless earthy odors that rise from the steaming soil, our eye is caught by a glint of color against the brown of last year's leaves and we bend with delight above the scattered clumps of hepatica, so charming because so varied in color. Pink, white, blue and greenish-yellow, they smile up at us, challenging our cameras to reproduce one-half of their delicate charm. Less retiring in disposition, the clear white flowers of the blood-root whiten yonder hollow like a belated flurry of snow, while all in and out and round about the daintily pink-veined faces of the spring-beauty rise from among the leaves.

These first flowers are all very low-growing. In such haste are they to greet the spring, that they do not wait to rise far from the bosom of Mother Earth before unfolding their petals to the sun. This adds somewhat to the difficulty of photographing them in their environment; but the difficulties are not insuperable and the subjects well worth a little effort.

Nature makes rapid changes in her garb at this time o' year, and if we are kept away from the woods for a week or so just now, on our return we find the scene transformed. That gleam of deep blue among the dark green leaves means that the violets are here, and if we look closely in this moist soil by the old fallen tree we may find the rosy-purple spikes of the showy orchis rising between its pair of thick, shiny leaves. That drift of white froth along the bank is the foam-flower or false niterwort, and the translucent nodding whiteness among blue-green feathery foliage is squirrel's corn and Dutchman's breeches. Beautiful subjects to photograph, all of them, as are also the Canada violet, tallest and least retiring of its family; the painted trillium, seeming like the pale ghost of its dull and ill-smelling sister, the "Ben-jamin," and, speaking of

ghosts, that strangest of woodland growths, the ghost-flower or Indian pipe.

One who goes to the woods hoping to bring home satisfactory portraits of these spring-flowers will need something more than his regular equipment. If a hand-camera is used, the lens, being of too wide an angle for this, will include too much and the flowers, themselves, will seem too small and inconspicuous. This can, in a measure, be overcome by the use of a portrait-attachment which slips over the front of the lens and, narrowing the angle, greatly increases the size of the image.

It is quite likely that a snapshot will not give enough exposure; in that case the camera must be on some support. A tripod will be too tall for these smallest flowers, unless it be one of the small telescope variety, and a rock or a pile of stones will serve as a support.

If possible, choose a clump of flowers that stands somewhat alone, and that has a rock or tree-trunk as a background. If there are too many flowers or leaves in the group chosen, those which are least desirable may be clipped out with scissors in such a way as not to disturb those which remain.

The questions of background and light will prove the most difficult of solution, and it is wise to be provided with some aids to that end. It is hardly probable that in many instances the natural background will be simple enough to serve our purpose, and a piece of fairly heavy

medium gray cloth or cardboard, placed far enough back to be out of focus, will aid the composition surprisingly. If the sun strikes too strongly on this ground or on the flowers, a piece of white cheesecloth hung over a branch will do away with confusing shadows and spots of light. Sometimes a piece of white card can be used most advantageously to reflect light upon dark foliage or to lighten a too dark shadow. Be sure that no intervening blade of grass or bit of foliage gets in front of your lens, as is likely to happen when the camera is placed so low.

If you are dependent upon a view-finder, be sure that your distance is accurately measured, for sharp definition is essential to success in subjects of this kind, where the delicate texture of the flowers and the characteristic veining of the leaves form so large a part of their charm. The smaller stops should be used very sparingly, however, or your background will be made too sharp and confusion will result. Those who have a plate-camera and can see their composition on the ground-glass have a great advantage in selecting the proper stop.



FOXGLOVE

KATHERINE BINGHAM



AFTERNOON-TEA
MRS. CHARLES S. HAYDEN
FIRST PRIZE — HOME-SCENES





FOR APPLE-SAUCE

WILL G. HELWIG

With some of the long-stemmed delicate blossoms, like the star-flower and anemone, it will be almost necessary to use some sort of wind-shield, easily improvised with a folding background, as they seem to sway with the slightest breath of air. These spring-blossoms are, perhaps, the most fascinating and the hardest to photograph of any in the cycle of the year. As the season advances, the crowding blossoms are less retiring in their habits and the daisies, fleabanes and coarser flowers of summer greet us cheerfully at every turn. Surely, nothing but a color-plate could do justice to the flaming carpet spread over the meadows in July, when the gold of the buttercup is blended with the flame of the orange-hawkweed by the background of grass and daisies. Even a color-screen and isochromatic plate would be inadequate to reproduce such a magic carpet. Advanced workers who take pride in obtaining absolutely correct color-values will doubtless wish to use panchromatic plates for flower-photography. These plates require careful handling in loading and development, but they are sensitive to red as well as to yellow and green and prevent that color being a little too dark

in the print, as is the case even with orthochromatic plates and a color-screen.

Taller and taller the flowers grow as the year grows old — the last gorgeous setting of Nature's great drama. Joe Pye, Queen Anne's lace and the purple asters make glorious the roadsides and we welcome

"The mist on the far horizon, the infinite tender sky,
The rich, ripe tint of the cornfield,
And the wild geese sailing high,
And all over upland and lowland
The charm of the golden-rod,
Some of us call it autumn, and others call it God."

The golden-rod offers a color-proposition that has met us in various shapes all the year, from cow-slip through buttercups to wild sunflower. The brilliant yellow is lost on the film unless a ray-filter be used to brighten it. This lengthens the exposure and allowance must be made according to the depth of the screen. A two-times or a three-times screen is a good practical depth.

But, perhaps, our thoughts have been too lowly and we have been passing by the beautiful shrubs and trees



THE RESTFUL HOUR

DR. F. F. SORNERBERGER

in blossom-time. Here is an easy and delightful field for our lens: a graceful branch of hobblebush against the dark background of the woods, or a slender Hawthorn-tree on the edge of the thicket like a delicate misty sprite about to vanish into its shade. Then the fruit-trees, too, are beautiful in blossom-time, and an apple-tree in full bloom against the sky is a good test of one's technique. The cherry- and plum-trees often group themselves prettily and cry out to be perpetuated.

But our field is a broad one and the cultivated flowers of our yards and gardens have also a place. Here are infinite possibilities from the first pale snowdrops and crocuses to the chrysanthemums and cosmos of the late fall. The tall flowers, such as larkspur and foxglove, make very effective studies, and many of the flowering shrubs can be decoratively treated.

Once one has one's eyes opened to the possibilities of graceful arrangement and decorative treatment of flowers in their habitats, charming subjects will lie in wait for him all the year through, and he will be increasingly grateful to that camera of his which has lured him away from cares and troubles out into the

open and introduced him to so many of the beauties that lie all about him, only waiting for the "seeing eye."

This competition is broader still; it is intended to include growing flowers in the home — potted plants and flowers in window-boxes and conservatories. Such plants as the azalea, begonia, geranium, balsam, jonquil, hyacinth and fuchsia offer a variety of possibilities.

A Convenient Washing-Pan

To make a very inexpensive pan for washing prints, procure a milk-pan about sixteen inches in diameter and five inches deep. Around the brim and about three-fourths of an inch from the top, drill three-eighths-inch holes at intervals of about two inches. These will let out the water, but prevent the prints from going over the top as would be the case if the holes were not there. If one large hole is drilled, the suction of the water passing out will cause the prints to collect in one spot. By directing the current of water against the side of the pan, the prints will revolve and in this way wash thoroughly. Such a device costs but little. *W. E. Jost.*

Washing Roll-Films

WHEN roll-films are being washed in a trough after development, they, of course, sink to the bottom and remain there rolled up together in such a manner that their whole surface is not properly washed. Some time ago I had many of my films spoiled in this manner. After a time there appeared a wide-stained band across the film, caused through the hypo not being properly washed away where the curling of the film made two parts of it touch. For those who are bothered in the same way a good idea is to suspend the films in the water by means of pieces of cork which have had a slit cut in their side, into which the corner of the film may be fixed. They will wash perfectly in this manner, as their own weight will partly unroll them, and the hypo will sink to the bottom. — *The British Journal of Photography*.

A Rapid Fixing-Bath

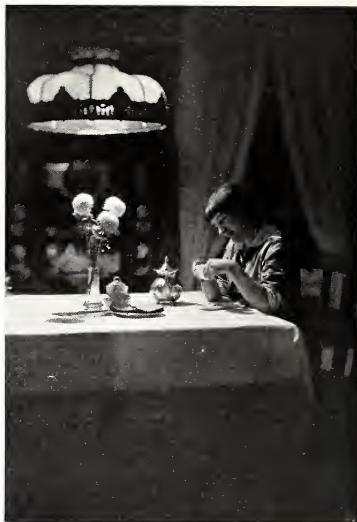
E. A. MELVILLE gives an interesting formula for rapid fixing of plates, films and papers in *The British Journal of Photography*. Dissolve in warm, not hot, water the following:

Hypo.....	4 ounces
Sal ammoniac.....	1 ounce
Potassium metabisulphite.....	$\frac{1}{4}$ ounce
Water to.....	20 ounces

The bath may be used as soon as cool enough. For bromide and gaslight papers double the quantity of water. Fixing will be complete in ten minutes.

Working Up a Feeble Image

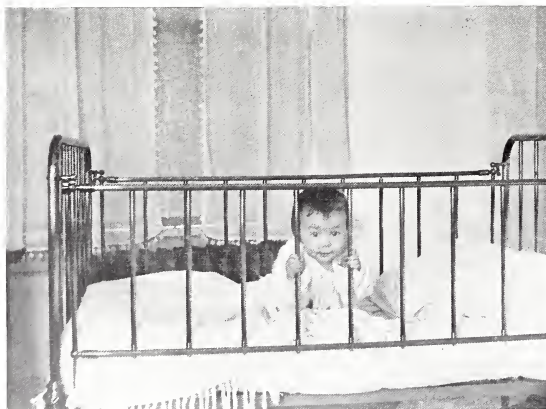
MR. A. RADCLYFFE DUGMORE, the well-known nature-photographer, may be numbered among those artists of the camera who never practise faking or retouching; he is not a "nature-faker." At the same time he believes in the legitimacy of chemical methods, states *The Amateur Photographer*, and in exploiting them to the fullest extent when dealing with his



SIX-O'CLOCK TEA

CHAS. H. PARTINGTON

HONORABLE-MENTION — HOME-SCENES



"GOOD MORNING"

JOHN O. SCUDDER

HONORABLE MENTION — HOME-SCENES

plates. On some occasions, when after the caribou in Newfoundland, the best pictures presented themselves at dusk. Often it was so dark when he made the exposure that he was unable to see anything on the focusing-screen, and the developed image, so far as any image was visible, was extremely unsatisfactory. In such cases he made positives on a contrast plate, and got the thing up as strongly as possible, afterwards reverting back to the negative, and then again back to the positive — going, in all, through four or five different processes of this kind, until finally he arrived at a plate which had some printing-quality, and obtained a presentable result. Needless to say, the first negative in such a case, although without printing-quality of its own, requires very careful development.

THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and all regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston.

Judging the Negative

So many things may influence the quality of a negative that it is sometimes difficult for the novice to tell in what part of the process things have gone wrong, if his films are not all that he expected.

To start at the beginning — how can one tell if a film be over- or underexposed? The results of exposure and development are so closely related that they can scarcely be considered separately. Let us take a table in front of a window, cover it with a piece of white paper and look through a few negatives. This first one makes a very good print. Let us see if we can tell its good points. Hold it a few inches above this printed page and see if the printing shows through all parts of the film. We speak of a negative as having "good contrast" when the difference is quite marked between the dense and the thin parts of the image.

Now if this is a very "contrasty" film, you will probably see the letters very faintly, if at all, through the sky, and quite plainly through the thinner portions. This means that your print will be brilliant, with clear whites and good depth of shadow. Now hold the film over the white paper at such a distance and angle that you see every part clearly. Look at the thinner portions first. You will see in the tree-trunks, for instance, that there is a wealth of delicate detail in the bark, and that the foliage is also full of detail. Then look at the sky and you will see the cloud-forms plainly — it is not a blank space. Detail in both the highlights and shadows shows that exposure and development are evenly balanced and approximately correct.

Now look at the next one over the printed page. No trace of print can be seen through the denser parts, but in the shadows it scarcely obstructs the vision at all. This means underexposure and overdevelopment, and the resulting print will be of the "ink and chalk" variety, lacking in detail in both lights and darks; for, if you hold this film over the white paper, you will see that you have simply a silhouette of the tree, showing only the outline, the space enclosed being almost clear glass, and the denser parts are blank blackness, probably spreading a little over the outline of the darker parts.

A properly-developed or underdeveloped underexposure will have no more detail in the shadows, for it is impossible to obtain in development what has not been put there by exposure, but the highlights will show detail and will not encroach on the outlines. It is far better to under- than overdevelop an underexposure; for then, in printing, detail can be obtained in the lights without making the darks so inky black.

This third film shows just the opposite characteristics from the last. The printing shows almost equally through all parts of the image. This is what we call a "flat" negative; it lacks contrast. The scale from the strongest light to the darkest dark is very short. This

may be the result either of overexposure or underdevelopment of a normal exposure. Viewed over the white paper, it will show a wealth of detail in all parts of the image and this is the sort of film that can be redeemed by intensification. The detail is there and intensification will give you the needed contrast.

For overexposures, overdevelopment is better than under, for, although the resulting negative may be very dense, so that the print will scarcely be visible through any part of it, still the contrast will be better than if less time were given to development, and a little patience in giving a long time to the printing will give fairly satisfactory results.

An *underexposed* film, then, will be lacking in detail in the shadows. An *underdeveloped* film will be full of detail, but lacking in contrast.

An *overexposed* film will be full of detail, but foggy and flat, whereas an *overdeveloped* one will be too contrasty, or, if also overexposed, very thick and black.

What Paper to Use

HAVING become familiar with the different kinds of negatives, let us see what grade of paper will give us the best prints from each.

Some variety of gaslight paper can be found to suit almost every requirement. For a good normal negative, the best results will usually be obtained on the less contrasty papers, such as Special Velox, Normal Cyko and Hard Azo.

The degree of contrast is also affected by the intensity of the light and the distance from the source of light. A good printing-light is an electric "turnip" light of 50-candle power, and for ordinary use the distance should be equal to the diagonal of the negative to ensure even lighting. If you find the print from some negative too contrasty, hold the frame nearer the light, but keep it in motion to make certain that the entire negative is illuminated uniformly. If this is still too contrasty, try dull daylight, but remember that a film that requires one-minute exposure by artificial light will require only a few seconds by daylight, so much greater is the intensity of the latter.

If, on the contrary, your prints show too little contrast, try increasing the distance by half and doubling the exposure.

If they still look flat and gray, another grade of paper is called for and probably a print on "Regular" Velox, Contrast Cyko or on Azo Hard X will give you a good snappy print. It is astonishing many times to see how much these more vigorous papers will bring out from a seemingly hopeless film.

For flat, thin negatives, then, use the Regular Velox, Contrast Cyko, or Azo Hard X grade at a good distance from the light, and for the too contrasty films the Special Velox, Normal Cyko or Hard Azo, used near the light or printed even by dull daylight.

THE ROUND ROBIN GUILD MONTHLY COMPETITION

For Beginners Only

Closing the last day of every month. Address all prints to PHOTO-ERA, Round Robin Guild Competition, 383 Boylston Street, Boston, U. S. A.

Restrictions

ALL Guild members are eligible in these competitions provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Anyone who has received only Honorable Mention in the PHOTO-ERA Monthly Competition for advanced workers still remains eligible in the Round Robin Guild Monthly Competition for beginners; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

Prizes

First Prize: Value \$5.00; *Second Prize:* Value \$2.50; *Third Prize:* Value \$1.50; *Honorable Mention:* Those whose work is worthy will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "General;" but only original prints are desired.

Prizes are chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. All prints submitted, except prize-winners, will be returned if postage is sent in a separate letter with the data.

Rules

1. These competitions are free and open to all members of the Round Robin Guild. Membership is free to all subscribers and regular purchasers of PHOTO-ERA sending name and address for registration.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Data-blanks will be sent upon request.

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

Awards — Beginners' Contest

Closed Jan. 31, 1914

First Prize: W. Haedrick, Jr.

Second Prize: Marshall Fowler.

Third Prize: L. Vinton Richard.

Honorable Mention: H. M. Appel, F. W. Clough, Gordon Forsyth, J. W. Heebner, E. Keaough, E. L. Leppert, Irene G. Libby, Jay Satterlee, John H. Stockdale, S. A. Weakley.

Special commendation is due the following workers for meritorious prints: George S. Akasu, Miles J. Breuer, Roscoe W. De La Mater, Frank C. Edwards, Paul M. Elder, Ernst F. Gates, Roland B. Hall, Jr., C. Lindblom, J. H. Shackleton, Edward Wichers.

Cleaning Bromide Prints by Toning

In a recent issue of *The Amateur Photographer*, Henry Underhill describes a very interesting method of transforming a stained black bromide print into a splendid sepia.

"Dissolve an ounce of common alum in 10 ounces of water, add 4 or 5 ounces of your usual hypo solution, and then drop in about 20 minims of nitric acid (no other acid will do). Heat the mixture in a metal developing-dish of suitable size, until it just does not boil. The print must have been previously hardened by half an hour's soaking in dilute formalin. Then immerse it in the hot hypo-alum solution for a few seconds, turning it over and over, and all development or fixing-stains will disappear. If you keep the print in the hot solution for a couple of minutes or so, it will turn to a very nice sepia color (sulphide toning). This method, so far as I know, is the only satisfactory way of sepia toning gas-light paper prints. Every other sulphide process that I have tried gives a nasty yellow tinge to the sepia. But this gives a really good sepia to 'vigorous' Velox paper. The 'soft' variety tones chocolate, not very pleasing.

"I devised this formula for sulphide toning Velox prints, and I learnt incidentally that it removes all stains very quickly before affecting the black color of the print.

"The proportions given are not at all particular; you may vary them within quite wide limits. The solution works best (for toning) when it has been used once. I never throw it away until it gets too dirty for anything, but use the old and add fresh every time. Now that I have learnt the 'dodge,' I never throw away a stained print—everybody gets such at times. I wait until a small number—or large—accumulate, and then I cleanse the lot, and if any are overprinted, and then I tone them sepia, because the process reduces them somewhat."

Might Be a Long Wait

Patient Individual: "If you'll take a picture of me catching a fish, I'll pay you a good price for it."

Photographer: "Very well; but I warn you that I have to join my regiment in six months." — *Pele-Mele*.



BROOK-SCENE IN WINTER
 MARSHALL FOWLER
 SECOND PRIZE — BEGINNERS' CONTEST
 THE CREEK
 W. HAEDRICH, JR.
 FIRST PRIZE — BEGINNERS' CONTEST



Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.

M. L. C. — There seems to be no reason why you should have trouble to detect the sensitive side of bromide paper in the darkroom. It always curls sensitive side inward slightly at the edges, and, of course, this side should be placed in contact with the negative or, when enlarging, face outward toward the negative.

P. H. O. — Gaslight prints of varying degrees of softness may be had by varying the printing-distance. The nearer the printing-frame is to the light, the softer the print, and *vice versa*; but do not attempt to print at a distance nearer than the diagonal of the printing-frame. The practical application of this fact is to print dense negatives nearer and thin negatives farther away from the light, remembering that the printing-time varies with the square of the distance. In other words, if the distance is halved, the exposure is only one-fourth as great, while if the distance is trebled, the exposure is nine times as great.

T. O. E. — Bright red tones on bromide papers are not often wanted, but the Barnet formula is the best we know. Immerse a sulphide-toned print in a solution containing 10 grains of ammonium sulphocyanide and 1 grain of gold chloride to each ounce of water until the desired tone is obtained. In warm weather it is well to soak the print for 10 minutes in a 20 to 1 alum-bath before putting it in the above bath.

M. A. K. — Yellow stains on negatives rarely occur when an acid fixing-bath containing chrome alum is used. It might be well to adopt it hereafter. To remove the yellow stains caused by pyro or hydroquinone developer, immerse the negative in the following:

Water	10 ounces
Iron sulphate	1½ ounces
Sulphuric acid	½ ounce
Powdered alum.....	½ ounce

H. O. W. — If you wish to dry negatives by artificial heat, first immerse them for a few minutes in a 1 to 30 solution of formalin to render the gelatine insoluble.

G. A. S. — The reason that one condensing-lens is sometimes used, although most condensers are composed of two plano-convex lenses, is because of the lesser cost; the use of one condensing-lens, however, requires the source of light to be twice as far away as if a pair of such lenses were used. In consequence, the exposure is four times as long, which does not seem to matter to an amateur of leisure. Of course the use of a pair of lenses, instead of one single lens, is more convenient, as it requires less room (distance between the object and the source of light); but the cost is increased twofold, the price of these lenses varying in proportion to their size.

S. A. C. — A developing-tank should be the kind in which the plates stand on edge — *vertically*. There are tanks in which the plates lie *horizontally*, in which case the method with face down is preferable; and in that case glycin is preferable to pyro.

Miss R. D. — To detach mounted prints, proceed as follows: If the print cannot be removed from the mount after prolonged soaking in tepid water, the adhesive must have been either glue, mucilage or some similar preparation which will ordinarily resist the action of water, either cold or tepid; and although we could recommend several experiments which might prove successful, we are convinced that the best method is first to soak the print in tepid water so that the mount becomes thoroughly softened, and then to peel the mount from the back of the print until the print itself has been reached.

This method has been followed by experts successfully for many years past with the utmost success. Of course, greater care should be taken as the print is being reached, and finally and incidentally the character of the mountant will be revealed and further action be taken



THE PROSPECTOR

E. D. LEPPERT

HONORABLE MENTION — BEGINNERS' CONTEST

accordingly. If a gelatine print is to be removed from the mount, it should never be soaked in hot water or in alcohol.

P. G. R. — Glycin is a very clear-working developer and potassium bromide is rarely if ever used in tank-solutions of it. If your negatives lack contrast, they are overexposed if dense, and underdeveloped if thin. With certain glycin solutions very long periods of development are necessary. Not knowing your formula, no definite information is possible.

"The Art of Retouching and Finishing and Coloring Photographs," by Robert Johnson, will tell you what you wish to know. We can supply this for 70 cents, postpaid.

B. P. S. — Small opaque spots on negatives are caused by iron scale in the water, or by sediment in the fixing-bath. Draw wash-water through a filter.

Print-Criticism

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Guild Editor, PHOTO-ERA, 333 Boylston Street, Boston. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.

E. L. C. — Yes, indeed, we are very glad to see any of your work at any time. The photograph you send of yourself, made at a table by the light of a drop-lamp, is interesting and shows something of what may



WOODLAND-SUNSHINE L. VINTON RICHARD
THIRD PRIZE — BEGINNERS' CONTEST

be accomplished in this line of work. A higher position for the camera would have been beneficial, and the composition would have been improved had the book and hand on the chair-arm been omitted. Not only do they form a second center of interest, affecting unity, but they are too white and so too prominent.

Not having any data, it is difficult to advise you further, except to emphasize the fact that more detail is necessary in the shadows to convey the true impression to the eye. This must be obtained by more ample exposure, and in these gaslight effects, so-called, a small supplementary flash will do wonders.

W. M. O. — Your landscapes are in the main very satisfactory, except that many of them show signs of underexposure, or what is more likely, overdevelopment. In the latter case, the whites would be too strongly emphasized and the shadows would be lacking in detail,

as in Number 1. In some cases they are overprinted, in other cases they seem to be really underdeveloped and overprinted, as in Number 2 and Number 3.

A. L. C. — The persons are looking into the camera, one of the most common faults committed by beginners or inexperienced pictorialists. Also, women or children dressed in white are not usually suitable for a landscape, as they cannot harmonize with the surroundings. This picture suffers from too strong contrasts, and the background is not happily chosen. The persons appear to be taken just as they were without any artistic arrangement or setting.

Judging from the picture, a suitable background could easily have been found. You will note that the tree rising from the back of the two ladies and the double trunk rising from behind the head of the central figure do not escape the notice of a critical eye. The picture is divided into two distinct parts by this central double tree-trunk; the eye verges to the left and then to the right. The picture lacks unity most of all.

M. N. B. — The picture of the brook appears to be underexposed and underprinted and has too strong masses of light, each of which attracts the eye and prevents a centralization of interest and repose. The strong, bright light showing through the branches in the upper right-hand corner ought to be very much subdued. This can be done easily. If the camera had only been turned to the left, the objectionable light in the upper right-hand corner would have been obviated, and the much-needed picture-space at the left would have been thus gained.

S. T. P. — The road in the woods is an inviting pictorial subject and might have been treated effectively and happily if the picture had been taken during sunlight. The picture now is dark, gloomy and unattractive, but the spot is capable of yielding a very artistic view.

V. B. L. — The view of the canal-walk in receding perspective presents decided pictorial possibilities of which, however, you have not availed yourself very successfully. The question of light seems to be the principal subject for criticism. The interest here is also divided, for the eye rests with satisfaction, first upon the bit of woods at the left of the path and then upon the receding stream. There is a lack of harmony in the presentation of the entire subject. Trimming here would be of little avail, unless the right-hand section containing the canal were cut away, thus leaving for a complete and satisfactory picture the woods at the left and the footpath at the right.

R. A. S. — The picture of what appears to be a saw-mill with a winding road in front, a grazing cow at the right, and a man walking out of the picture in the left-hand corner, contains enough possibilities to have made a better arrangement. It is a gray, sunless day and there are no shadows, which contribute so much to the success of a landscape of this sort. The wooden structure of the mill occupies the exact center of the picture which, in this case, is artistically objectionable.

H. T. E. — A path in the woods is a very satisfactory subject for the camera. Your present treatment of the subject, however, is very restless. The picture is spotty, with patches of light. It lacks unity and repose. Perhaps if the same view were taken at a different time of the day, or at the time of the year when the foliage of the trees was dense enough to shut out the light, a more pleasing effect would be obtained.

S. C. E. — The harbor-scene is very interesting, but the two vessels caught by the camera are too close together and occupy the exact center of the picture-area. The effect would have been more artistic if the craft in the foreground had been caught before it had entered quite so far into the middle of the picture.

Exposure-Guide for April

Calculated to give Full Shadow-detail, at Sea-level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of time in table. From 8000 to 12000 feet use $\frac{1}{2}$ of exposure in table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class I plates, stop F/8 or U. S. 4. For other plates, or stops, see tables.

For other stops multiply by the number in third column

Hour	Bright Sun	Sun Shining Through Light Clouds	Diffused Light	Dull	Very Dull	F/4	U. S. 1	× 1/4
11 A.M. to 1 P.M.	1/50	1/25	1/12	1/5	1/3	F/5.6	U. S. 2	× 1/2
9-11 A.M. and 1-3 P.M.	1/40	1/20	1/10	1/5	1/2	F/6.3	U. S. 2.4	× 5/8
8-9 A.M. and 3-4 P.M.	1/30	1/15	1/8	1/3	2/3	F/7	U. S. 3	× 3/4
7-8 A.M. and 4-5 P.M.	1/20	1/10	1/5	1/2	3/4	F/11	U. S. 8	× 2
6-7 A.M. and 5-7 P.M.	1/15	1/8	1/2	3/4	1	F/16	U. S. 16	× 4
						F/22	U. S. 32	× 8
						F/32	U. S. 64	× 16

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions under which one works. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop.

*These figures must be increased up to five times if light is inclined to be yellow or red. Latitude 60° N. × 1 $\frac{1}{4}$; 55° × 1; 52° × 1; 30° × $\frac{1}{2}$.

SUBJECTS. For other subjects, multiply the exposure for average landscape by the number given for the class of subject.

1/8 **Studies of sky and white clouds.**

1/4 **Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 **Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most tele-photo subjects outdoors; wooded hills not far distant from lens.

2 **Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away from the camera.

4 **Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 **Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 **Badly-lighted river-banks,** ravines, to glades and under the trees. **Wood-interiors** not open to sky. **Average indoor-portraits** in well-lighted room, light surroundings.

Example :

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an open landscape, without figures, in April, 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/40 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of "Table for Other Stops," opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/40 × 4 = 1/10. Hence, exposure will be 1/10 second.

For other plates consult Table of Plate-Speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/40 × 1/2 = 1/80. Hence, exposure will be 1/80 second.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

<i>Society or Title and Place</i>	<i>Date</i>	<i>Particulars of</i>
KODAK EXHIBITIONS Indianapolis, Tomlinson Hall. Dayton, Memorial. Toledo, Coliseum Theater. Detroit, Armory.	April 6 to 11 April 13 to 18 April 20 to 25 April 27 to May 2	Eastman Kodak Company, Rochester, N. Y.
CALIFORNIA CAMERA CLUB PHOTO-ERA Prize-Pictures.	March 20 to April 20	Secretary, California Camera Club, 833 Market St., San Francisco, Cal.
BOSTON ART CLUB Collection of Gum-Prints by J. H. Garo.	April 5 to 19	Secretary, Boston Art Club, Boston, Mass.
EXHIBITION OF CHILDREN'S PICTURES BY WILLIAM SHEWELL ELLIS, Philadelphia.	March 1 to 31	William Shewell Ellis, Philadelphia, Pa.
TORONTO CAMERA CLUB SALON	April 27 to May 2 1914	A. G. Fraser, Secy.-Treas., Toronto Camera Club, Toronto, Canada.
WANAMAKER ANNUAL EXHIBITION	March 2 to 31 1914	John Wanamaker, Photographic Dept., Philadelphia, Pa.

Plate-Speeds for Exposure-Guide

Class-numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.
Ilford Monarch
Lumière Sigma (Violet Label)
Marion Record

Class 1/2, P. E. 128, Wy. 250, Wa.
Barnet Super-Speed Ortho
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Seed Gilt Edge 30
Wellington 'Xtra Speedy Extreme

Class 3/4, P. E. 120, Wy. 200, Wa.
Anso Film, N. C. and Vidi
Barnet Red Seal
Central Special
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Ilford Zenith
Imperial Special Sensitive
Paget Extra Special Rapid
Paget Ortho Extra Special Rapid
Seed Color-Value
Wellington 'Xtra Speedy

Class 1, P. E. 111, Wy. 180, Wa.
American
Barnet Extra Rapid
Barnet Ortho Extra Rapid
Imperial Non-Filter
Imperial Orthochrome Special
Sensitive
Kodak N. C. Film

Kodoid
Lumière Film and Blue Label
Marion P. S.
Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso Speedy

Class 1 1/4, P. E. 90, Wy. 180, Wa.
Central Comet
Cramer Banner X
Cramer Instantaneous Iso
Cramer Isonon
Cramer Spectrum
Defender Ortho
Defender Ortho, N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 20x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.
Cramer Anchor

Lumière Ortho A
Lumière Ortho B
Class 2, P. E. 78, Wy. 120, Wa.
Cramer Medium Iso
Ilford Rapid Chromatic
Ilford Special Rapid
Imperial Special Rapid
Lumière Panchro C

Class 3, P. E. 64, Wy. 90, Wa.
Barnet Medium
Barnet Ortho Medium
Hammer Fast
Seed 23
Wellington Landscape
Stanley Commercial
Ilford Chromatic
Ilford Empress
Cramer Trichromatic

Class 5, P. E. 56, Wy. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho
Wellington Ortho Process

Class 8, P. E. 39, Wy. 30, Wa.
Cramer Slow Iso
Cramer Slow Iso Non-Halation
Ilford Ordinary
Cramer Contrast
Ilford Half-tone
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.
Lumière Autochrome

OUR ILLUSTRATIONS

Edited by WILFRED A. FRENCH

THE picture which first greets the eye this month is a scene in Florida treated as a "bleed-cover," a form of cover-design which doubtless will be received with favor by our readers. The print serves the purpose of a base or background to display in a pleasing and effective manner the title and home of this magazine, and emanates from the Florida portfolio of the artist-author, Julian A. Dimock, whose illustrated paper on camera-work in the Peninsular State begins this issue.

Mr. Dimock's ability as a photographer and illustrator, although favorably known to PHOTO-ERA readers through his several camera-articles, has never been shown more gratifyingly than in the present instance. Whether his subjects be stationary or in motion, they reveal Mr. Dimock's true artistic feeling and sense of pictorial proportion. His technical mastery, amid all conditions, has also won for him an enviable reputation. As in all his work, the pictures which accompany the present article are typical of the country which he describes, and present its spirit and character with convincing truth. Altogether, this article on Florida is an object-lesson to young writers eager to prepare similar papers for the monthly or the daily press, and demonstrates the importance of the art of book-illustrating by the camera.

Data: no detailed information regarding Mr. Dimock's pictures, pages 160 to 167, except that a $6\frac{1}{2} \times 8\frac{1}{2}$ Reflex Camera fitted with Voigtlander & Son's Collinear lens, series II and of $11\frac{1}{2}$ -inch focus, and Cramer Iso medium double-coated plates were used; tank-development and pyro-acetone.

The tower building, the architectural wonder of the age, presents a serious problem to commercial photographers. Rarely can it be photographed from the ground unless working-distance, exceptional in city streets, be available. As in the admirable photograph of the Singer Tower, page 168, the viewpoint must usually be from a high window of a neighboring building and the lens must possess to the full the qualities of rectilinearity and flatness of field. Data: Bausch & Lomb-Zeiss Protar lens, Series V, No. 2, Glossy Velox print.

The illustrations for W. S. Davis' article, pages 169 to 172, exemplify this worker's well-known pictorial ability referred to very frequently in PHOTO-ERA. Data: "In Blossom-Time." May afternoon with sunshine on branch; 1 second; F/11; Ingento AA filter; Cramer Trichromatic plate. "April Afternoon." 3.40 p.m., in hazy light; $\frac{1}{2}$ second; F/22; Cramer Inst. Iso. plate. "Willows in Springtime." April, hazy afternoon; 1 second; F/16; Carbutt B16 plate; M. Q. developer. "A Foggy Vista." May, 6.30 p.m.; 1 second; F/11; Inst. Iso. plate. "May Evening." May, the night before full moon; 18 minutes for landscape beginning at 7.40 p.m.; K. R. lens, F/8; Inst. Iso. plate. The moon received a separate exposure of 20 seconds upon the same plate, the camera bellows being drawn out to increase its size. Tray development.

Admirable home-portrait by W. C. Odiorne, page 173. The arrangement is simple, with only a few accessories and these are discretely managed. Data: August, 11 A.M.; good light; Empire State camera; single lens; $6\frac{1}{2} \times 8\frac{1}{2}$ Stanley; metal-hydro; direct print on Eastman Etching Bromide.

The series of small illustrations, pages 174 to 178, are intended to show the capabilities of high-class minia-

ture roll-film cameras, of vest-pocket dimensions, and it is thought that the mere mention of the respective types will suffice as data for the present.

John W. Allison and F. O. Butler, page 174, New-man & Guardia Roll-Film Sibil Camera.

W. K. Menns, page 175, Ensignette Camera.

John W. Gillies, pages 176 and 177, Icarette Camera. Reproductions reduced from $6\frac{1}{2} \times 8\frac{1}{2}$ enlargements.

S. I. Carpenter, page 178, Eastman Vest-Pocket Camera.

The charming little figure by Goldensky, page 179, shows how a master-photographer adapts his art to the type of model he is posing. Print for reproduction on Willis & Clements, warm black Satista paper.

Many of our friends no doubt will approve Harry G. Phister's attractive Easter picture, page 180, in place of the traditional Easter lily. Appropriate and unconventional, Mr. Phister's composition is thoroughly artistic in conception and execution, and also in the expression of refined sentiment. The design is extremely happy, and the artist is to be congratulated upon his complete success. Data: April 27, 1913; 12 m.; faint sunlight; 4 x 5 Century Camera with $6\frac{1}{2}$ -inch K. R. lens; stop, F/8; $\frac{1}{2}$ second; Ideal ray-screen; Standard Polychrome plate; pyro; 8 x 10 enlargement on Cross Bromide; 4 x 5 glossy print for reproduction.

Harry D. Williar's high reputation as a landscape-pictorialist is well known. His success as a worker in portraiture and genre is comparatively recent, the portrait-study, page 181, being, in the Editor's opinion, one of his best efforts. Mr. Williar's success as an exhibitor is attested by the following list of honors: *The Amateur Photographer*, London: three first prizes, four second prizes, one special prize, six Honorable Mentions; *Photography and Focus*, London: two bronze medals; *Photographic Times*, New York: one first prize, three "Highly Commended"; *American Photography*, Boston: second prize. Data: May, 1913, 3 p.m.; 4 x 5 plate-camera; 9-inch Vesta lens; stop, F/6.3; light from window; 3 seconds; Hammer B; M. Q.; Cyko Buff enlargement from head nearly one inch in diameter.

Edward H. Weston shows his pronounced artistic temperament not only in his photographic work, but in his other accomplishment—poetry. His parody on Kipling's "Vampire" is an admirable effort. As in the original poem, in the present burlesque each verse is followed by a sort of refrain (printed in italics), each repetition being slightly varied. Instead of supplying a gum-print from his well-filled portfolio, Mr. Weston modestly referred the Editor to several gunnists whom he regards as his superior. This is the reason that J. H. Garo, of Boston, was asked to furnish a print to which request this artist complied quite willingly.

Pastoral, by J. H. Garo, page 183, is one of a large and varied collection of multiple gum-prints, in monochrome and color, each a veritable masterpiece. It is impossible adequately to describe the rare beauty of Mr. Garo's achievements in this field of pseudo-photography. A born artist and trained in the principles of art, with the gift of lucid and refined expression, Mr. Garo finds it as easy to interpret a noble theme with the aid of the camera and gum-bichromate as with the brush and palette. As a gunnist he stands in the front rank, and his achievements are remarkable for beauty of design, subtlety of expression and richness of tones.

Our Guild Editor, Katherine Bingham, is a photographer of great diversity, and is as much at home in every branch of outdoor-work as in portraiture—her regular vocation. From her extensive collection of nature-studies, she has contributed an original and graceful composition to illustrate her hints to participants in our "Growing Flowers" contest. See page 186. The picture demonstrates that conventional, hackneyed forms of arrangement are easy to avoid, if the camerist will but try.

The Photo-Era Monthly Competition

THE contributions to the Home-Scenes contest were numerous and artistically gratifying. To determine the first prize was no easy task, for the choice lay between the two superbly-printed compositions of Mrs. Hayden and Mr. Helwig. The former contestant was finally awarded the chief prize.

"Afternoon-Tea," page 187, is an harmonious and well-ordered design, executed in an artistic spirit and with ample technical skill. The window is particularly well managed. The figures appear a little self-conscious, and more spontaneity in pose and action would have heightened the general artistic impression. Data: January, 1914; 2.30 P.M.; sky overcast; Wollensak lens, $9\frac{1}{2}$ -inch focus; F/4.5; used wide open; $6\frac{1}{2} \times 8\frac{1}{2}$ Stanley plate; about 4 seconds; direct Angelo Sepia print.

Mr. Helwig has expressed the spirit of his theme with complete success, although the subject proper has been done many times by others. Page 188. But—as has been remarked before in this column—it is interesting to see how well one person can treat an oft-repeated idea. Here the lines are pleasing and the interest is well centered. The technique is superb and the spacing admirable. Data: November, 3 P.M.; dull day; south window; Goerz Dagor; stop, U. S. 8; 4 seconds; Seed 26X; pyro; 4×6 Artura D. Matte.

The work of Dr. Sornberger needs no introduction to PHOTO-ERA readers. Page 189. It is always marked by pure artistic feeling and expert technical knowledge. There is an undeniable atmosphere of the home in this picture, a sense of comfort and contentment. One also appreciates the element of novelty, the entrance to the home, rather than the interior, serving the purpose of the artist. The foreground has been made very attractive by soft shadows. It is to be regretted that the balance of the picture is slightly marred by the technical defect in the window at the left. Data: August, 4 P.M.; hazy sunlight; 5×7 Stanley; rodinal; Goerz Dagor, F/6.8; $\frac{1}{25}$ second; print, $4\frac{1}{2} \times 6$ Seltona Linique.

No one can charge this series of contest-pictures with pictorial monotony, for, thanks to Charles H. Partington, we have on page 190 a pretty little scene in which artificial illumination plays a prominent part. Some of our gifted readers, known by past performances, could easily weave a few interesting verses around the young woman seemingly content to be entirely alone at her six o'clock tea, and no provision has been made for a companion at the table. Data: October, 1913, 8 P.M.; one inverted Welsbach gas mantle in dome over table; 5×7 Cramer double-coated Inst. Iso; old 14-inch Darlot Portrait-Lens, stops removed, yielding approximate aperture of F/5; 20 seconds; pyro-acetone in tank, 30 minutes; 5×7 Eastman Etching Black Plat.; 5×7 Empire State Camera No. 2.

The treasure of the home asserts his presence in a manner that urges the camera at once into play. That this picture is prized by the parents of the sociable little one, requires no argument. Data: May; 5×7 plate-

camera; $8\frac{1}{4}$ -inch R. R. lens; U. S. 16 stop; sun shining in room; one second; Imperial S. S.; metol-hydro; $7\frac{1}{2} \times 10$ enl. Cyko linen; enl. with Cooke lens.

The Beginners' Competition

It is gratifying to note that interest in this competition is steadily increasing. The quality of the entries is also a subject for congratulation. Already several participants have each won two prizes, which show that their efforts are worthy of encouragement and appreciation. "The Creek," page 193, is a picture of unusual merit, possessing superb material which has been used with commendable artistic discretion. The group of empty boats forms the principal pictorial note to which the group of trees looming up in the distance is an effective foil. The rich, somber tone of the landscape accords well with the theme which is one of strong originality. Data: August, 5 P.M.; fair; $3\frac{3}{4} \times 4\frac{1}{4}$ Kodak; Cooke lens; $5\frac{1}{2}$ -inch focus; $\frac{1}{100}$ second; stop, F/8; color-screen; Cramer plate; metol-hydro; 6×8 Montauk bromide print.

The interesting winter-scene, page 193, yields its author, Marshall Fowler, the second prize in the beginners' class, and all his entries have shown a distinct variety of pictorial subjects. His view in the woods robed in a mantle of white, with the brook still running its zig-zag course, evinces a strong love of nature—and the camera. The pictorial interest is confined to the little stream, but diminished in the direction of its source. Data: No. 1A Kodak; R. R. lens; Eastman film; U. S. 16; $\frac{1}{2}$ second; B. & J. three-times ray-filter; tank dev. with Eastman powders; $4\frac{1}{2} \times 7$ Velvet bromide print.

"The Prospector," page 194, is an excellent camera-subject. The figure is posed appropriately and effectively against a picturesque background—the wooded bank of a shallow stream. In the matters of illumination and proportion, our young artist will doubtless seek to improve himself. Here the time of day was not chosen with the best judgment, because the foliage, being lighted very brightly, is too conspicuous and disturbing. Later in the day it would be in shadow and thus form a more suitable background. Now the water-line cuts the picture-area in halves, and if about three-quarters of an inch were to be removed from the top, our reproduction would doubtless be improved thereby, but this would not apply if the background were in shadow. Data: Oregon, October, 9.30 A.M.; R. R. lens; stop, F/32; Seed 26X; one second.

"Woodland-Sunshine," page 195, invites the interest of the beholder because of the uncommonly effective play of light on the trees and the floor of the woods. The perspective is very pleasing and the general treatment of the subject shows a commendable degree of pictorial feeling, although a bit trimmed away from the right side of the picture might result favorably. Data: October, 3.30 P.M.; sunlight; 5 seconds; Cramer Iso; edinol-hydro; 4×5 Graphic A; 6-inch B. & L. R. R. lens; U. S. 8; Ingento A color-screen; $6\frac{1}{2} \times 8\frac{1}{2}$ Monox bromide, sepia-toned by potassium ferricyanide-sodium sulphate method, dyed with yellow aniline dye for sunlight-effect.

The Dangers of Photography

"Oh, by the way, dear," said the husband as he was preparing to leave the house in the morning, "I may develop some plates at the camera-club to-night. If I find I can't be home to dinner, I will send a note by messenger."

"Don't trouble," said his wife, sweetly, "I've just read it on the blotting-pad with a mirror."—*Adapted.*

ON THE GROUND-GLASS

Edited by WILFRED A. FRENCH

Please Don't Push

THE repair-department of the photographic dealer benefits as much by accidents, a share of which fall to the lot of nearly every camerist, as by the careless use of high-class equipments by persons who ought to know better. Take, for instance, the fate of a pocket-camera in the hands of an inexperienced or uninitiated user. Instead of releasing the arms, which connect the body of the camera with the bed, in order to close the camera; or instead of releasing the lever-catch, with the aid of which the lens-front is pulled out and fastened, and pushing the latter back into its housing before closing this type of camera, some persons will press hard against the lens-front. Instead of yielding, the lens-front with its vertical supports is simply being bent backward out of its normal position and the camera is at once thrown out of adjustment, the axis of the lens no longer striking the sensitized plane at right angles. After a while the bungler succeeds in closing the camera, but the mischief has been done.

The Editor, himself, has had several of his smaller cameras ruined in this way, by lending them to persons who professed to be experienced camerists. He hopes that these and other thoughtless manipulators of pocket-cameras will heed this arraignment and, particularly, the mandate, "Don't Push."

Perfunctory Correspondence

THE proprietor of a certain prosperous photographic studio, who spent more time outside than inside of his office, causes to be added to his business-letters with a rubber stamp the following legend: "Dictated but not read by Mr. Smith."

One day he received back one of these letters across the top of which was written: "Opened but not read by Mr. Brown."

Is a letter, not important enough to receive the final scrutiny of a busy man, worth reading by an equally busy recipient? It is an open question.

Portrait-Painters Use Photographs

ARTISTS of the brush no longer conceal the fact that they rely very largely on photography when they paint the portraits of their patrons. They were formerly loath to admit the charge lest they be accused of inability to draw correctly; but having once proved their technical skill as draughtsmen, they do not hesitate to resort to the camera as a means to obviate the necessity of numerous prolonged sittings.

Thus, we learn that the famous French artist, Gandara, has recently executed the commission to paint the portrait of an American social leader, without having once seen the sitter, on receipt of her photograph, jewels and favorite costume. To impart the required graceful figure and to save the sitter's time, June Cheron — a well-known Paris figure-model and who has posed for many portraits of society women — was employed.

It is whispered that this form of substitution is practiced by certain fashionable photographers in this country, and for this reason the photographic outfit is discreetly kept out of sight when not in use.

Indifferent Pictures of Children

A NOTED cynic has said that if the adoration of the baby, which culminates in baby-shows, could be reduced to a degree of sanity, and the superfluity of thought, affection and care be bestowed upon the child when it needed it more, fewer children would go wrong, and the nation would have better citizens. This certainly offers food for serious reflection; but we suppose that this critic has in mind also the plethora of photographs of the little ones. The only objection in this regard, which occurs to us, is the general artistic quality of such pictures. The more really good baby-photographs can be produced, the more we, individually, would be pleased. It is unfortunate that relatively few mothers care anything about this artistic quality of the photographs of their babies, so long as the expression is, at least, fairly good. Of course, a troublesome baby is not expected to yield highly satisfactory pictures, even at the hands of an artist-photographer; but when baby is good, and, particularly, when it has reached, at least, the age of three, the photographer should find it easy to obtain artistic results before the camera. If the photographer have good taste in the matter of accessories and harmony of colors, his suggestions in this respect will have weight with the parent who is wise. Light-colored hair-ribbons are an abomination, whatever may be fashion's decree. They generally disfigure the natural beauty of the child's head. Why paint the lily? Fancy the charming baby-heads of one of the famous madonnas depicted with gawky, incongruous, light-colored ribbons, or with their beautiful hair held together by bow-knots! Would it not seem almost like sacrilege?

Be that as it may, there is beauty in natural simplicity. This was proved conclusively by Sarah Price, Katherine Jamieson, Frances and Mary Allen and Miss Reineke in their children's portraits, published in February PHOTO-ERA. The best portrait-painters generally ignore artistically offensive adornments of their sitters.

Yankee Thrift

INSPIRED by his love of nature to become a camerist, a son of rural Vermont visited the bee-hive of Ralph Harris and Company, Boston, U.S.A., one Saturday afternoon, quite recently. He asked to be shown a 6½ x 8½ view-camera and was deeply interested in its neat appearance and easy manipulation. With praiseworthy tact, the clerk then demonstrated a high-priced folding pocket-camera, the diminutive size and operation of which greatly impressed the embryonic camerist. As he was weighing the matter in his mind, comparing the merits of each camera, his father — a shrewd New Englander accustomed to estimate dimensions — came to the rescue, remarking: "Take the big one, my son. It costs only half as much and you're getting ten times as much for your money."

Appropriate Advice

"I FOUND that the amateur photographer had surreptitiously prepared a room in the house for his developing."

"Then he'd better keep it dark." — *Exchange.*

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Edited by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department
Address all such communications to The Crucible, PHOTO-ERA, 383 Boylston Street, Boston

Universal Developers

II. — Rodinal

THIS popular liquid developer is a highly-concentrated solution containing neutral sulphite and an alkaline salt of paramidophenol, but no excess of caustic alkali. Rodinal has excellent keeping-qualities, not only in full bottles, but also in those that have been opened and partly used. Although in opened bottles Rodinal becomes darker in color, this change produces no noticeable effect upon the working-properties of the solution. When prepared for use by the addition of a large proportion of water, the keeping-qualities are not so good. After a few days the solution turns reddish, and gradually loses its developing-power. If it is desired to keep Rodinal in a diluted condition for a long time, use a 2.5- to 5-percent solution of sodium sulphite, anhydrous, for dilution instead of water.

Rodinal produces excellent negatives — clear, clean and of splendid gradation in highlights, middle-tones and shadows. The degree of contrast depends upon that of dilution. To develop, take 1 part Rodinal to 20 parts water, at a temperature of 60 to 65 degrees. For overexposures, reduce the water to 10 to 20 parts; for underexposures, increase the water to 20 to 40 parts.

For twenty-minute tank-development at 65 degrees, take 1 part Rodinal to 40 parts water.

For lantern-slides, use 1 part Rodinal to 30 parts water.

Negatives developed with Rodinal seem to lose density in the fixing-bath and it is necessary to carry development a little further than appears to be required.

For bromide papers, take 1 part Rodinal to 100 parts or less of water. The resultant tone varies from a pleasing blue-black to a rich gray-black, and is dependent upon the proportion of water employed, strong solutions giving blue-blacks and weak solutions giving gray-blacks.

For gaslight papers, take 1 part Rodinal to 15 or 20 parts water, adding 3 drops of 10-percent potassium bromide solution to each ounce of solution.

Autochromes from Autochromes

IN a paper read before the Société Française de Photographie, M. Ernest Cousin makes a clever suggestion regarding the reproduction or duplication of Autochromes. We are indebted to *The British Journal of Photography* for the translation. M. Cousin writes:

"In most of the communications upon this subject the authors have dealt with the reproduction of one positive Autochrome from another, but I think it is an easier matter to work upon a different system. M. Gimpel has pointed out that when we copy an Autochrome made in daylight upon another Autochrome plate, using again daylight and the same light-filter, it is almost invariably found that the reproduction possesses a predominant tint. M. Gimpel has found that this is usually

yellow; he corrects it by the use of a pale violet screen.

"In order to explain the presence of this predominant tint in the copy of a positive Autochrome made by the same light and the same light-filter as for the original exposure, we can assume that every color-transparency possesses to a greater or lesser extent a predominant color, which varies according to the color-screen and light, and in the case of good color-transparencies is so slight as not to affect the color-rendering. But when we copy such Autochrome with the same light and color-screen, the predominant tint formed in the reproduction-process is added to that of the original Autochrome, and may then be accentuated to a degree which is most noticeable.

"But the circumstances are quite different when the process is started from an original negative-Autochrome, that is to say, one obtained by omission of the reversing-process. In this case, if the color-screen is not exactly balanced as regards the light, the predominant tint which is produced exists in the complementary color, and in the reproduction-process serves as a correcting-screen. In short, the predominant tints of the negative and the positive color-transparencies compensate for and tend to extinguish each other. It is obvious that in making the copy it is necessary to use a light of the same character as that with which the original negative was taken.

"The exposure requires to be rather longer than for Autochrome plates which are to be reversed, and it is well to develop to a somewhat more intense negative. As regards the scale of reproduction I imagined there, would be something in a slight degree of enlargement, say to three times the area, since in this case each unit of the mosaic color-screen of the Autochrome negative would be enlarged in the same proportion and, roughly, would illuminate at least one of the color-units of the plate subsequently exposed, thus ensuring possibly a more correct color-rendering. Nevertheless, I have made copies the same size and even somewhat reduced which have been satisfactory. The results already obtained incline me to think that the production of Autochromes from a negative should be of service chiefly in professional photography, where it is important to obtain several copies from one exposure. When working by artificial light there is the advantage of great constancy, and the great intensity of the light allows of shorter exposures. Lastly, this method is applicable to other color screen-plates, providing that the plate on which the positive is obtained is exactly similar to that used in making the negative."

The Two-Focus Lens

HAVING an anastigmat provided with an extension-lens, the worker is ready for almost anything. With the extra rear lens the image is fifty per cent larger, yet has been made by a doublet with all its corrections at a speed of F/8.

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Photographic Dealers' Association Second Annual Convention, Hotel Sherman Chicago, March 24-27, 1914

THIS meeting is expected to be even more successful and of greater benefit to dealers and manufacturers than the previous one. Over fifty manufacturers will exhibit merchandise, including the latest improvements in motion-picture apparatus, imported cameras and all makes of domestic apparatus and supplies. Practically every advancement and improvement in photography, made either at home or abroad, will be on exhibition and discussed, so that every one attending will be thoroughly conversant with the latest achievements in the photographic field.

The forming of a National Credit-Bureau and the prices of plates and papers are among the important subjects which will be discussed. Talks of special interest by those most competent to know will be given on subjects that will help dealers to increase the efficiency of their business and profit.

Manufacturers and dealers from all over the United States are looking forward to a most enjoyable as well as profitable four days, and judging by the preparations already made by the officers of the association, they are certainly not likely to be disappointed. Burke & James, Inc., will give a banquet to dealers on Wednesday, March 25.

The following is a list of some of the manufacturers and their exhibits, alphabetically arranged:

Albany Card and Paper Mfg. Co., Photographic Mounts, Albany, N. Y.
Albany Chemical Co., Chemicals, Albany, N. Y.
Allison & Hadaway, Specialties, New York, N. Y.
American Cinematograph Co., Motion-Picture Apparatus, Chicago, Ill.
Anso Co., Photographic Material, Binghamton, N. Y.
Automatic Developing and Printing Co., "Special," Newark, N. J.
Bausch & Lomb Optical Co., Lenses and Projection-Apparatus, Rochester, N. Y.
Bell & Howell Co., Motion-Picture Apparatus, Chicago, Ill.
Berlin Aniline Works, Chemicals, New York, N. Y.
Burke & James, Inc., Photographic Supplies, Chicago, Ill.
Burroughs Wellcome & Co., Tabloid Chemicals, New York, N. Y.
E. S. Caywood, Flashlight-Apparatus, Philadelphia, Pa.
Central Dry-Plate Co., Dryplates, St. Louis, Mo.
A. M. Collins Mfg. Co., Card-Mounts, Philadelphia, Pa.
Crown Optical Co., Lenses, Rochester, N. Y.
Dennison Mfg. Co., Specialties, Chicago, Ill.
Ernemann Photo-Kino Works, Cameras and Motion-Picture Apparatus, New York, N. Y.
Forbes Dry-Plate Co., Dryplates, Rochester, N. Y.
G. Gennert, Camera and Motion-Picture Apparatus, New York, N. Y.
C. P. Goerz Amer. Opt. Co., Cameras and Lenses, New York, N. Y.
C. N. Graves Co., Timing-Clocks, Philadelphia, Pa.
Gundlach-Manhattan Optical Co., Cameras and Lenses, Rochester, N. Y.

Haloid Paper Co., Papers, Rochester, N. Y.
Hammer Dry-Plate Co., Dryplates, St. Louis, Mo.
Ralph Harris Co., Specialties, Boston, Mass.
Ilex Optical Co., Lenses and Shutters, Rochester, N. Y.
International Photo-Sales Corp., Cameras, Lenses and Specialties, New York, N. Y.
Japanese Water-Color Co., Transparent Water-Colors, Rochester, N. Y.
J. L. Lewis, Specialties, New York, N. Y.
Mallinckrodt Chemical Co., Chemicals, St. Louis, Mo.
Max Meyer, Cameras, New York, N. Y.
McIntosh Stereopticon Co., Projection-Apparatus, Chicago, Ill.
Motion-Picture Apparatus Co., Motion-Picture Apparatus, New York, N. Y.
Geo. Murphy, Inc., Photographic Material, New York, N. Y.
Nicholas Powers Co., Motion-Picture Apparatus, New York, N. Y.
Photo Lines Co., Motion-Picture Apparatus, New York, N. Y.
Presto Mfg. Co., The Infallible Tinting-Masks, Pittsburgh, Pa.
Prosch Mfg. Co., Flashlight-Apparatus, New York, N. Y.
Reflex Camera Co., Reflex Cameras, Newark, N. J.
C. B. Robinson & Sons, Studio-Furniture, Grand Rapids, Mich.
Seavey Co., Backgrounds, Chicago, Ill.
Seneca Camera Mfg. Co., Cameras, Rochester, N. Y.
J. H. Smith & Co., Victor Photo-Specialties, Chicago, Ill.
The American Paper Goods Co., Paper Goods, Kensington, Conn.
The Heinn Co., Albums, Milwaukee, Wis.
The Precision Machine Co., Simplex Projectors, New York, N. Y.
The Wold Air-Brush Art-Shop, Air-Brushes, Chicago, Ill.
Victor Animatograph Co., Projection-Apparatus, Davenport, Ia.
Visible Photo-Printer Co., Automatic Printer, New York, N. Y.
H. C. White Co., Enlarging and Projection-Apparatus, N. Bennington, Vt.
Whyte-Whitman Co., Motion-Picture Apparatus, New York, N. Y.
Wollensak Optical Co., Lenses and Shutters, Rochester.
Worcester Envelope Co., "Berwick Developing- and Printing-System," Worcester, Mass.

M. A. Yauch

THE many friends of this prominent figure in the photographic trade will regret to learn of his death at midnight, Tuesday, February 24. While working as an artist in the Baker Art Gallery, Columbus, Ohio, Mr. Yauch began to experiment with gaslight paper emulsions. The invention of Artura was the result. Mr. Yauch soon obtained the assistance of the late Dr. Early, and together they put the paper on the market. Later, Schuyler Colfax made a great success of it. Mr. Yauch has been associated with the Eastman Kodak Company since it bought the business and began to manufacture the paper.



FLASHLIGHT, PROFESSIONAL PHOTOGRAPHERS OF PITTSBURGH

R. W. JOHNSTON

Pittsburgh Photographers Celebrate

WHILE, according to the old motto, "In union there is strength," it is also true that intelligence and prudence must prevail in the management of all organized bodies, if perpetual success is to be attained. How true this is, may be seen from the great and beneficent work that is being done by our photographic societies, more particularly by these composed of professional practitioners. We understand that the professionals of Pittsburgh, U. S. A., have a very flourishing society. To commemorate the event, a flashlight-group was made by President R. W. Johnston, of Pittsburgh.

The Anco \$5,000 Loveliest Women Contest

THE recent announcement of the Anco Company's \$5,000 "Loveliest Women" Contest has created intense interest in amateur and professional photographic circles. Blanks containing conditions of the contest were procured eagerly from every Anco dealer, and it is astonishing how many photographers are already at work photographing their "loveliest women."

To-day is the day to begin. Intending contestants should get their entry-blanks right away, understand the simple conditions and what a fine chance is open to everybody to win one of the fifty prizes that range from \$500 down to \$50 for one single photograph.

We cannot conceive a more attractive contest for the photographer interested to increase his business, to produce a big work and to earn a large sum of money and national fame. The inducement for lovely woman to have her beauty perpetuated is also very great.

The Anco Company is particularly happy to have received so many letters from professional photographers, stating that the novelty of the contest is not only appealing, but that the idea of exhibiting the successful

pictures before the people at the Panama-Pacific Exposition adds immensely to its value as a national affair.

Conditions are simple and contain virtually no restrictions. For instance, the contestant can use any style of camera and any film, plate or paper, but should state which on his entry-blank. The Anco Company is primarily interested to procure the photographs of "America's Fifty Loveliest Women," and to make the exhibition at San Francisco the most memorable in the history of photographic art.

Your "loveliest" woman is right at hand. Begin now to work for the pictures that may prove her one of "America's Fifty Loveliest Women." Get your friends interested and take the right sort of interest yourself. Talk to the Anco dealer nearest you about this contest. He will help you. Get the pride of your home-place into your heart. Wouldn't it be fine to have one of the "home" girls win a prize—to be known as one of "America's Fifty Loveliest Women."

Goodwin Patent Upheld

A DECISION upholding the patent claims of the Rev. Hannibal B. Goodwin against the Eastman Kodak Company, of Rochester, involving millions of dollars in royalties, was handed down by the United States Circuit Court of Appeals, at New York, March 10, confirming the opinion handed down by Judge John R. Hazel, of Buffalo. According to this decision, the Rev. Hannibal B. Goodwin is undoubtedly the inventor and entitled to all the benefits of the basic patent on photograph films. Goodwin died more than thirteen years ago.

If the decision is not overruled by the Supreme Court, Goodwin's widow and two children, who are living in Brooklyn, will be entitled to back-royalties for the whole period the Eastman Company has, according to the decision, been infringing on the patent.

BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices.

JAHRBUCH FUER PHOTOGRAPHIE UND REPRODUKTIONS-TECHNIK, für das Jahr 1912. Herausgegeben von Dr. Joseph Maria Eder. 27. Jahrgang. Illustriert. Price, 8 Mark. (\$2.00); postage extra. Halle a. S.: Wilhelm Knapp, 1912.

Conspicuous among European photographic annuals, and the best in the German language, is the year-book edited by Dr. Eder for the past twenty-seven years. Associated with him in the preparation of the current issue of the Jahrbuch were noted authorities in every branch of photographic activity and research, including such well-known names as A. C. Angerer, Joh. Gaedicke, P. Liesegang, A. and L. Lumière, Lüpke-Cramer, Adolf Miethe, Rodolfo Namias, Joh. Plotnikow, A. Seyewetz, J. W. Waterhouse, F. F. Renwick, E. J. Wall, Karl Zaar, Wilhelm Urban and W. Zschokke. The contents is obviously of the highest class, and deals with discoveries and improvements in processes, methods, apparatus and accessories, and new ideas in scientific investigation during the year 1913, each article being written particularly for Dr. Eder by an eminently high authority. There are also a complete review of last year's progress in photography and reproduction-methods, thirteen full-page inserts in color and monochrome to illustrate the last word in photo-mechanical printing-processes, and a complete index. The advertisements are strictly high-class, and paper and typography unsurpassed; in short, a volume for every photographic specialist and investigator.

THE LATENT PHOTOGRAPHIC IMAGE, ITS ORIGIN AND DEVELOPMENT. By Dr. M. Andresen. Price, 2.40 Marks (60 cents). Halle, a. S.: Wilhelm Knapp.

The precise story of the unborn photographic image still remains shrouded in mystery. Physicists have listened sympathetically for years to pleas from the uninitiated that light be shed upon this phenomenon, so akin to a pre-condition in human and animal life. While contributing in a measure to the solution of the problem — the theory of the origin of the latent image — Dr. Andresen explains in lucid German the practical side of the question — the composition of the sensitive film and the different stages of its preparation. The brochure is of interest to the physicist, the chemist, the plate-manufacturer and the scientific amateur.

PHOTOGRAPHY FOR THE SPORTSMAN-NATURALIST. By L. W. Brownell. 311 pp. Fully illustrated. Cloth, \$2.00. New York and London: The Macmillan Co.

Few branches of photography exert such a degree of fascination as the portrayal of objects and scenes of animal-life in the open. This engrossing activity has induced many an ardent sportsman to lay down his rifle and shotgun and take up the camera in their stead. It has been found that the exchange caused no regret, for hunting with a camera has been attended with just as much excitement and has yielded much more pleasure and satisfaction. Nature-photography has revolutionized the art of illustrating the life of wild animals. Drawings of such subjects — unnatural, inaccurate and often

ludicrous, because of the great difficulty encountered by the artist with his pen or brush — are now a thing of the past and are superseded by truthful photographs. The camera can do more in a fraction of a second than the most skilled artist can accomplish in hours of labored effort. Moreover, it is a helpful means to study nature, for it not only aids the camerist to see things that might otherwise escape his notice, but it enables him to make accurate records of the things he does see, helps to teach him the value of animal-life and to understand why he should refrain from the senseless and wanton killing of that life.

Although this branch of camera-work has now many devotees, few of them produce really good results or make serious efforts to improve their work. In order to succeed signally, a high degree of skill, energy and patience is required, and, barring an occasional and unavoidable hasty exposure, the results should be of the kind that require no apology on account of careless or inadequate workmanship.

Although published several years ago, Mr. Brownell's book continues to be recognized as a high authority. The requirements of a successful nature-photographer are the same to-day as they were ten years ago. Apparatus and methods have not been improved to any great extent; but the intelligent, resourceful worker can often find a way to improve on some one else's method, exercise more care, more perseverance. In seventeen exhaustive chapters Mr. Brownell prepares the ambitious student in nature-photography, beginning with a description of the necessary and most approved equipment, including the use of the telephoto lens and his own excellent way of photo-finishing. Then follows — always in clear, crisp and correct English — a recital of his methods to photograph the different classes of wild animals in their natural habitats — the larger kind; the smaller mammals; birds and their young; birds' nests; insects, fish and other forms of aquatic life; reptiles and amphibia; animals in captivity. Two chapters are devoted to wild flowers — cut and growing — and trees, fungi, etc. The volume concludes with a chapter on photography in camp and woods. The illustrations (original photographs) are admirable and very numerous, and demonstrate the complete success to be attained with the camera in the field of nature-photography.

UNCLE SAM'S STAR ROUTE. By Betsey Ross. 228 pages. With photographic illustrations by H. Oliver Bodine. Price, books, \$1.55 postpaid. Chicago: The Twentieth Century Publishing Company.

The story of a girl who, realizing the mistake of an engagement in which neither party understood himself nor the other, literally ran away from everything life held dear in the Iron Country because she would not dispute territory with another woman on so small a homestead as a man's heart. How she went to the farm of a cousin having an R.F.D. mail-route in the Potomac valley, lived the simple, wholesome life of the country, became a school-teacher, interested herself in various uplift movements and finally married a quarryman who made the social betterment of his employees an important feature of his life-work, forms an absorbing story told in the form of letters, or so-called "confessions." It is an absorbing narrative of everyday life, full of pathos and whimsical humor, with exceedingly frank observations and truths regarding the social status of the day.

Photographers will particularly enjoy the photographic illustrations by H. Oliver Bodine, every one of them a little gem. That more books of fiction are not illustrated in this manner is truly a pity.

DIE PHOTOGRAPHISCHE KUNST IM JAHRE 1913.
Herausgegeben von F. Matthies-Masuren. Zwölfter Jahrgang. Photographische Verlagsgesellschaft, M. B. H., Halle a. S. Price, \$2.50, postpaid.

This is the twelfth consecutive appearance of the foremost German photographic pictorial review. Of recent years, in particular, this galaxy of work by representative German-speaking pictorialists has reached a high level of artistic excellence, and the current issue is no exception in this respect. The book measures 9 x 12 inches and contains one hundred and sixty full-page gravures and halftones, which are devoted chiefly to German work, and a few pages to English and American pictorialists, among the latter being Dr. D. J. Ruzicka and Paul L. Anderson.

SCIENTIFIC AMERICAN REFERENCE-BOOK, compiled and edited by Albert A. Hopkins and A. Russell Bond. 1000 illustrations. Price, \$1.50. 1914. New York: Munn & Co., Inc.

The annual record issued by the publishers of *The Scientific American* is somewhat in the nature of a high-class almanac, except that its information is confined to scientific and economic topics, such as would interest the average inquiring mind.

Part I, the statistical department, includes such important subjects as Farms, Foods and Forests; Mines and Quarries; Manufactures; Commerce; Mercantile Marine; Railroads; the Panama Canal; Telegraphy and Cables; Wireless Telegraphy; Telephone Statistics of the World; Post-Office Affairs; Patents; Trade-Marks and Copyrights; Armies of the World; Navies of the World and Aviation.

Part II, the scientific department, is devoted to Chemistry, Astronomy and Time; Meteorology; Machine Elements and Mechanical Movements; Geometrical Constructions and Weights and Measures. There is a complete alphabetical index.

When Thieves Break In

MR. E. M. NEWMAN, the travel-lecturer, told the Editor of the first safe-robbery that has happened during his career. The incident occurred in Baltimore, at the Academy of Music, toward the latter part of February. One night, while Mr. Newman was in Brooklyn filling an engagement, professional cracksmen entered the office, blew open the safe and carried away over \$4,000.00, part of the money taken in during his lecture-season in Baltimore. The night-watchman was handcuffed to a post in the dress-circle and had to sit calmly by while the burglars wrapped the safe in rugs and wet blankets, drilled a hole in the door and blew it open with nitro-glycerine. Although Mr. Newman sincerely regrets the loss to the proprietor of the theater—who will have to indemnify the lecturer—he says that he takes off his hat to the burglars, for it is the nearest job he has ever heard of, no one hearing the explosion other than the manacled watchman.

Chicago Photographers' Association

At the last annual meeting the following officers were elected for the coming year: president, M. J. Steffens; first vice-president, George D. Stafford; second vice-president, August Heinemann; third vice-president, N. G. Couper; fourth vice-president, J. J. Johnson; secretary, Richard F. Gentzel; recording secretary, T. H. Johnson; financial secretary, A. W. Moody; treasurer, J. E. Dietrich.

The Cleveland Photographic Society

THE annual exhibition will be held at the Case Library, April 13 to 25, 1914. The conditions of entry follow:

All pictures must be mounted. Framed pictures will be accepted. Autochrome or color-process transparencies in viewing-boxes will be accepted.

Each exhibit must be marked with the name and address of the exhibitor and the title of the picture.

Exhibitors may enter as many pictures as they desire, but the Judges may decide not to hang pictures and will decide upon the arrangement and grouping.

Each exhibitor must make a list of his pictures on 3 x 5-inch index-cards, writing his name at the top of the card, followed by his initials, with his address on the line below. The titles of his exhibits must be given with a blank space of 1/2 inch left at the left-hand margin of the card. This card is for catalog-purposes.

First, second and third awards and honorable mention will be given at the discretion of the Judges. The Judges will also, at their discretion, decide that any exhibit is *hors concours* in its class.

The Judges will be three disinterested and competent persons, and their decision will be final.

Exhibitors will not receive more than one award in any class.

Each person submitting prints will receive a catalog of the exhibition, which will be notification of the acceptance or rejection of the pictures submitted to the Jury of Selection.

All pictures must be delivered, charges prepaid, to The Cleveland Photographic Society, care of Case Library, 812 Huron Road (Caxton Building), Cleveland, Ohio, on or before April 4, 1914.

All pictures will be repacked and returned to exhibitors as soon as practicable after the close of the exhibition. Special care will be taken of all exhibits, but responsibility for loss or damage cannot be assumed by the Society.

A. D. WILLIAMS,

Secretary-Treasurer,

P. O. Box 102, Cleveland, Ohio.

Photo-Art Clan

A RECENT organization of pictorial workers is the Photo-Art Clan of Brooklyn, N. Y., which is composed of about twenty camera-enthusiasts, among whom the best known is William H. Zerbe.

Any one who wishes to join may address F. J. Thornley, 563A Lafayette Avenue, Brooklyn, N. Y.

The Lumière-Jougla 1914 Year-Book

THIS pocket-edition of the photographic annual, issued by the Lumières, in clear and easy French, contains a collection of papers, formulae, tables, terms and sundry information of value to the practical photographer, more particularly to users of Lumière products. The advice given is based on the results conducted by the experts of the firm's Research Laboratory at Lyons, France, and is, therefore, absolutely authoritative. Among the numerous practical papers, is the super-sensitizing of autochrome-plates for instantaneous exposures; autochrome-work by flashlight (Perchlor Powder) and photography on silk, wood and other materials. There is also a complete list of French photographic societies and a full alphabetical index.

A copy of this little volume will be sent, postpaid, for 25 cents, by the Lumière-Jougla Co., 75 Fifth Avenue, New York.

LONDON LETTER

CARINE AND WILL A. CADBY

TIME flies, and we are around again to the month of our holiday-letter, and readers must forgive us if we do not, for once in the year, take the world or ourselves too seriously. From all we hear from England, it is also the holiday-month of photography at home, for very little seems to be happening.

One of our latest and most novel photographic experiences has been the taking of nude child-studies in the snow. At Camper, in the Engadine valley, six thousand feet above sea-level, we chanced on two children, who were prescribed sun-baths by a doctor. Still, sunny days are obviously necessary for this "cure," and the first "bath" is only of five minutes' duration, the time being extended as the skin becomes accustomed to the hot rays of the sun. It is a novel and pretty sight to see children, naked (except for their socks and shoes), gamboling in the snow, and the photographic possibilities of the subject are great. Think of the variety of lightings that are procurable, and the diversity of backgrounds that are at hand! and, somehow, the flesh-tones, particularly as they become somewhat bronzed, seem to accord quite naturally with the snow. We include a snapshot that we were able to procure of one of the children. When we think that around the corner, out of the sun, the temperature was well below freezing, and that the writers narrowly escaped frostbite on a ski-running expedition the day before the photograph was taken, we get some idea of the diversities of this fascinating climate.

It would be easy to write pages on the variety of work, or rather play, to which photography is subjected up in these snow playgrounds. Just now a popular young guest has departed for England, his leave having expired. Drawn up at the hotel-door stood the sledge that was to convey him down into the valley, and fifteen feet away—we are sure of the distance, for it had been carefully stepped many times over—were five small cameras, each with its charming and pretty mistress hending gravely over it. The time was 5.15 p.m. The sun had long since disappeared behind the mountains. Most of the lenses worked at about F/12. Out came the youth, click went the shutters, set at one-fiftieth of a second, and, alas! we are afraid that the film-makers will be the only people to profit by the results. But perhaps, after all, those little cameras served their purpose—even if they failed to record the departure, for the pain of separation was diverted at exactly the right moment by the strenuous effort of observation on the diminutive view-finders; and the sledge glided away amid a volley of cheerful snow-halls, without which up here no leave-taking would be complete.

As we stood watching the rapidly-diminishing sledge, we discussed this incident of the five spoiled films with Mr. Gahan—a well-known personality in the Kodak firm on this side of the water—and he totally disagreed with our suggestion that spoiled films were profitable to the makers, holding that every Kodak film that turned out a failure did distinct harm to the company, discouraging users from making further efforts and possibly terminating their photographic career altogether. "That is the reason," said he, "that we strain every nerve and use every device to prevent Kodakers from making mistakes. It is to our interest that they should obtain successes all the time."

This morning on the skating-rink, after luncheon on

the ice in the sun, we were asked to stand among others for a group-photograph. The self-possessed operator on skates, and not long from school, skimmed around us, shepherding the party into what she considered a good position. With her back squarely to the sun and her victims facing it, she briskly gave the word of command—"Now, please, look up." Bravely we all blinked up at her. Click! went her shutter, and the conventional "Thank you!" floated down the air—a welcome relief to dazzled eyes and screwed-up faces. Now this incident would not be worth recording were it not that it is typical of much of the amateur photography one comes across. The girl was young—no doubt she danced the tango; certainly she would not cling to old conventions in such matters—and yet, when it comes to photography, she deliberately, as if by instinct, follows one of the oldest, worst and most exasperat-



TAKING A SUN-BATH

THE CADBYS

ing—at least from the sitter's point of view—fetishes of the craft. Then, again, those who are to be taken seem to delight in uniting with the amateur photographer in foredooming his attempts at portraiture to failure, otherwise why should they again, as if by instinct, turn full-faced and square-bodied to the camera, even when not commanded to do so? It seems to be the same in all countries and with all races; at sight of the camera folks straighten themselves up just as if they belonged to an awkward squad ready for drilling.

"But it is only a snapshot," we are told when we demur at such arrangements, and that is just the point we are eager to make. Why should not a snapshot be as good as any other photograph, and even better, sometimes, through the rapidity with which it can be accomplished, thus allowing less time for people to get set and stiff? The very essence of a snapshot, particularly up in this snow playground, would seem to lie in its suggest-



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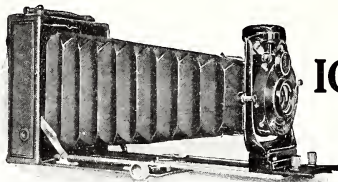
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ing a glimpse of what is really going on, and when this is accomplished how much more interesting and valuable are the results as reminiscences, bringing back vividly the happy, busy holiday. This can be done only by giving a good deal of time and attention to the subject, seizing on the right moment for the exposure, keeping the camera as much out of sight as possible, and sternly discouraging all "awkward-squad" methods.

Almost lost in the cloud of snapshooters, we discovered in this hotel a man who is seriously testing the new Marion 500 H. & D. plates in conjunction with the Multi-Speed shutter. We have examined some of his negatives that were given $\frac{1}{600}$ second exposure at F/6, and they are fully exposed and of good printing-density. The combination of this new fast plate and ingenious inter-lens shutter, working up to $\frac{1}{2000}$ second, seems to us a distinct advance in the direction of rapidity of exposure, which is what is universally desired. But there is always a fly in the photographic ointment. This Multi-Speed shutter, a product of the States, seems capable of doing almost anything from a quite silent time-exposure to $\frac{1}{2000}$ second; but some of the markings, which make all the difference in the speed, are so small that none but the sharpest eyes can see them at a glance.

We wonder how many of our readers remember clearly the first photograph they ever took? Probably about nine-tenths, and it is not unlikely that they still treasure the thought of that first negative, and can again conjure up the surprise and pleasure and triumph of the result. We have taken a referendum of the ninety-odd photographers in this hotel, and find that with most of them the memory of their first effort in photography is still green, and their conviction of its beauty assured. And yet when they are shown each other's early masterpieces, their critical faculties regain their sway, and their criticisms are telling, true and mostly destructive. Does not this fact give us to think, Are we really competent judges of our own work? KIRHAUS, LENZERHEIDE, SWITZERLAND,

Feb. 7, 1914.

Statement of the Ownership, Management, Circulation, etc.

Of Photo-Era Magazine, the American Journal of Photography.

Published monthly at Boston, Mass., required by the Act of August 24, 1912.

Editor,	Wilfred A. French, Boston, Mass.
Managing Editor,	Wilfred A. French, Boston, Mass.
Business Manager,	Wilfred A. French, Boston, Mass.
Publisher,	Wilfred A. French, Boston, Mass.
Owner,	Wilfred A. French, Boston, Mass.

Known bond-holders, mortgagees and other security-holders, holding one per cent or more of total amount of bonds, mortgages or other securities: None.

(Signed) WILFRED A. FRENCH.

Sworn to and subscribed before me this 24th day of March, 1913.

(Signed) SAMUEL DAVIS, Notary Public.

(SEAL)

(My commission expires Aug. 25, 1916.)



The camera is memory's maidservant. All artists now make use of the camera. — *Elbert Hubbard.*

BERLIN LETTER

MAX A. R. BRÜNNER

ON every large passenger-steamer we see nowadays a considerable number of male and female tourists armed with cameras which they direct towards numerous things in and about the ship. On the older vessels we were able to turn a cabin into a darkroom without much difficulty, as the rooms were small and the windows conveniently small. On the more modern steamers, however, we find more spacious cabins with much larger windows where it is somewhat harder to make them light-tight. Therefore, these floating hotels of the ocean are now equipped with real darkrooms provided with a red, yellow and a white electric lamp, water-tank, trays, racks and the like. Thus the passenger need not defer developing and printing his pictures until after arrival, but he can ascertain during the passage whether his photographic attempts were successful or not. In the latter case, he will repeat the snapshots under as nearly the same conditions as possible until he has really obtained what his heart longed for.

There is almost a necessity on board a big steamer to put the camera at work — the brilliant light, the strong reflection from the water, the mighty ocean, glorious sunsets, a distant ship, flocks of persevering sea-gulls, the scenery along the coast and last, but not least, the interesting scenes on board: all this impels the fortunate owner of a camera to get busy. Nothing is safe before the eagle-eye of such a keen sportsman, and even the commander of the ship is powerless to resist. It is a good way to make the time pass more quickly, and even years after such a trip the pictures form an endless source of pleasure. In recent times we heard even of photographic competitions for pictures made during the passage, the jury doing its work on board a day before the arrival at the destination. In this way over a hundred pictures were submitted on a single trip, and they were all exhibited in the large dining-room. From time to time the large German steamship companies send out luxuriously-equipped boats for pleasure-cruises and these are accompanied by a professional photographer engaged by the company to make special pictures, but is also permitted to take snapshots of passengers at fixed charges. The business is done in the same manner as by the beach-photographer in the numerous German cures, baths and seaside resorts, where the man with the camera has become a well-known figure. Photography has become so indispensable of late, that the Hamburg-American Line has established a special photographic studio in the Hamburg harbor, which is at the disposal of the literary bureau which formerly purchased pictures from outsiders.

About a year ago reference was made in PHOTO-ERA to the International Competition of the well-known camera firm of Ernemann, with headquarters at Dresden and a branch in the United States. The contest was arranged on account of the twenty-fifth anniversary of that mighty establishment. It grew so quickly that the premises, amply sufficient only three years ago, had to be more than doubled, and now still further extensions are in preparation. This Jubilee Contest is divided into three sections — the first being open to amateurs only, the second to professionals and the third to both. As amateurs are classed persons who do not earn their living by the camera. This, of course, does not mean that an amateur may not include his expenses in the sale of his pictures. The range of subjects is very wide, for no less

than five groups are provided. Group A is designed for artistic work such as genre, landscape and portraiture; Group B, for moving-objects, sporting-scenes; Group C, for natural science; Group D, for technical views and such made in three colors, and the last group is reserved for those who have never obtained a prize in any contest. The total sum of prizes offered in Section I is \$1,500. Half that sum is offered in Section II, open to professionals only. Two groups are provided, the first sort of pictures to be made in a studio or other rooms, the second in the open air. For Section III \$200 are given, viz., for kinematographic views. No more than one prize is awarded to one competitor. At least three pictures must be submitted in each group, or at least six altogether. The prints must be mounted, but not framed. Each must show a title inscribed on the back, whereas the real name and address have to be sent in a letter enclosed in an envelope bearing outside the title. The competition closes July 31 this year, when the material must have been received at the main office, Dresden, Schandauerstrasse 48, Prize-Competition Department. About October the awards will be published in the daily and photographic press of all civilized countries, and the best examples will be reproduced in the trade-press.

In several letters to PHOTO-ERA the writer has mentioned the scientific theater Urania, the director of which is also the president of the most prominent photographic society in Berlin. Some weeks ago an extremely interesting illustrated lecture was given, dealing with transmission of photographs by telegraph. This is the invention of Professor Korn, of Munich, and it was his first assistant, Professor Glatzel, who this time delivered the lecture. The process is, briefly, as follows: A print is made from the glass negative upon a film which latter is put around a glass cylinder. The latter is rotated and at the same time moved along the axis as in a phonograph. The bent film is impinged by a strong light-ray, point for point, and this ray falls upon a cell of selenium, a strange metal which becomes more or less conductive for currents the more it is illuminated. If the light passes through a highlight of the film, the selenium is impinged by nearly the full light and allows the full current to pass through, while only a weak current will flow through if a dark portion of the film is impinged by the ray. Thus, owing to dark and light portions, the resistance of the selenium-cell is constantly changed, and the same happens many miles away in the receiving-apparatus. In this the shadow of a thin movable wire covers a slot, which latter is in front of the receiving-film. According to the strength of the current, the shadow is deviated electro-magnetically and the slot is impinged more or less by the light. As the cylinder of this film revolves at the same speed as the above one, the ray draws again, point for point, in very thin spiral lines light and dark portions upon the film, and we see on it a true reproduction of the original. The results of the Korn system of telephotography, as it is briefly called, are very satisfactory now after ten years' intensive working. On the routes, Berlin to Munich, Paris to London, Berlin to Paris and Paris to Monte Carlo, pictures of considerable size have been transmitted within twelve minutes, which were so clear that cuts for newspaper illustration were made from them. But most pictures have been transmitted by the police in tracing fugitive criminals, as speed is here a chief consideration. This process must not be confounded with the tele-autographic writer, which has scarcely anything to do with photography and has been known for about a decade.

There are, of course, various difficulties for the practical application of this telegraphic transmission of a picture. It is of value only when greater speed is re-

quired to send pictures, viz., when the distance is great. Attempts are being made to improve the system until pictures can be transmitted by wire from and to the United States. The lecturer mentioned at the end of his very instructive address that Englishmen and Frenchmen take a keener interest in this invention than we Germans do, which may be attributed to their greater love of sensation. The average German cares but little whether an important photograph appears the same day or a day later. Yet we must not judge the value of the discovery from that standpoint alone, for its applicability is much larger than it seems at first.

Photographers' Association of America

THE National Convention, to be held June 15 to 20, at Atlanta, Ga., promises to be one of the best in the history of the Photographers' Association.

The picture-exhibit will be more than a showing of portraits. The pictures will be graded by the judges and all those rating above sixty-five per cent will be placed in the accepted class. All the prints will be hung, and the ever-present judges will give private criticism of the pictures to any one. This will enable every one to know the judges' opinion of the relative value of the portraits, which will be much more instructive than a careless examination. Never before has the opportunity been given to every exhibitor to obtain the private criticism of competent judges. Twenty-five dollars will be paid for each of the best pictures (not to exceed twenty in number), to form the nucleus of a permanent salon.

The manufacturers and dealers are preparing their exhibits of the new fall styles and these, with all the latest discoveries and inventions of benefit to the profession, will be on display. Educationally there is nothing in the country to equal this Convention. Every one who attends is assured that he has up-to-date information regarding the newest and best things in photography.

National publicity will be given this Convention through the Associated Press and other media.

Parcel-post rate on photographs, revision of the fire-insurance rates on studios, the licensing of photographers and other live issues are expected to be brought before the Congress of Photography for definite action.

A special train is being arranged for the photographers of New York City and vicinity, and one for the photographers of Chicago, also St. Louis. There will be a boat load from New England who will travel by water to Savannah, Ga., thence by rail to Atlanta. Two salesmen who made a 1500-mile trip through the Southern States report that every photographer upon whom they called is planning to attend. The meeting-place this year is one that will attract the men from the North, South, East and West.

Photographers who want to grow in the profession cannot afford to miss this Convention. The P. A. of A. is the one organization through which each photographer may secure the reforms which he would like to see accomplished, but which he cannot bring about single-handed. This is the year when we all get together and make the Association strong enough to accomplish national reforms for the profession.

H. O. Bodine Makes a Change

HARRY O. BODINE, until recently manager of the publicity-department of the Wollensak Optical Company, of Rochester, N. Y., has accepted the position of director of publicity and sales with the Raw Film Supply Co., Inc., New York City, where he hopes to meet his friends and acquaintances when they are in New York City.

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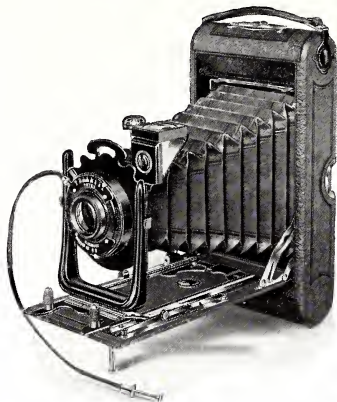
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The Watch-Pocket Carbine

It seems that practically every big camera-maker, both here and abroad, has concentrated upon the vest-pocket camera as a center of interest in his 1914 lines. These small instruments continue to diminish in size and increase in their picture-making possibilities.

We now have, through Allison & Hadaway, 235 Fifth Ave., New York, their own importation of Butcher's watch-pocket Carbine, one of the smallest of the new instruments, making pictures $2\frac{1}{4}$ inches square, fitted with an Aldis Uno anastigmat in a Compound shutter, and equipped with all of the movements necessary in modern picture-making, all for the very reasonable price of \$22.50.

The combination should prove most interesting to those who appreciate the possibilities, both economical and convenient, of the very small high-grade camera.

Victor Intensifier

Most amateurs will at times underdevelop their plates, thereby getting negatives which are too thin from which to make good prints. These negatives can be transformed easily into good printers by Victor Intensifier. It is quick-acting and very simple to work. Try it to-day on some of your underdevelopments and you will never be without it.

Tenax Cameras

THE firm hold which Tenax cameras have upon the American market is not entirely due to the well-known high quality of Goerz lenses. These are plate or film-pack cameras with ground-glass focusing-screens and every adjustment for the most exacting work, such as architecture, yet in as compact form as a roll-film instrument. Minimum size and strong, rigid construction combined with handsome appearance have won the praise of all who admire superlative qualities.

Anyone Paper

THIS new printing-paper gives black, red or brown tones and all intermediate shades by a varied exposure and development only; no darkroom nor toning required. The results resemble carbon or platinum.

The greatest difficulty in photography up to the present has been to obtain satisfactory warm tones by a single and simple process by exposure to artificial light and subsequent development without toning. The problem has been solved after many years' research and paper can now be supplied with an emulsion producing results as indicated above by exposure and development alone.

The process is entirely different from any on the market and possesses obvious advantages. Daylight is not required for printing, nor is a darkroom necessary. Printing and development can be done in an ordinary room fully lighted by gas or electricity. No expense is incurred by a special developer as all the developing-agents in general use for the development of plates or paper will give satisfactory results; for instance, metol, rodinal, pyro, rylol, etc., may be used. Mr. J. L. Lewis, 522 6th Ave., New York, will be pleased to send you a dozen 4 x 5, white or cream, for 25 cents.

Hauff Developers

Do not experiment with your underdeveloped negatives; that picture which you may not be able to obtain again might be spoiled if not properly handled. Your developing-room is not complete without Hauff developers—a standard for high quality on the American market for the past twenty years. G. Gennert, 24 and 26 E. 13th St., New York, 320 S. Wabash Ave., Chicago, Ill., and 682 Mission St., San Francisco, Cal., will send you instructing booklets concerning these developers upon request.

Queen City Cameras

THE Conley Camera Co., Rochester, Minn., will gladly send upon request a catalog of the Queen City Cameras, in many sizes and constructions for amateur and professional use. The attention of PHOTO-ERA readers is directed particularly to the Queen City Double Extension Camera No. 25 in 4 x 5 and 5 x 7 sizes. It is an instrument at a moderate price adapted to many uses.

Satista

W. J. MARKLEY, demonstrator of Willis & Clements Philadelphia, manufacturers of Platinotype papers, was in Boston recently showing a beautiful collection of prints on his firm's new platinum and silver paper, Satista. The prints were from the studios of Elias Goldensky and Allen Drew Cooke, Philadelphia, and revealed the clarity, brilliancy and gradation for which Satista is steadily gaining many friends. The sterling and valuable qualities of this new printing-paper were reviewed at length in March PHOTO-ERA.

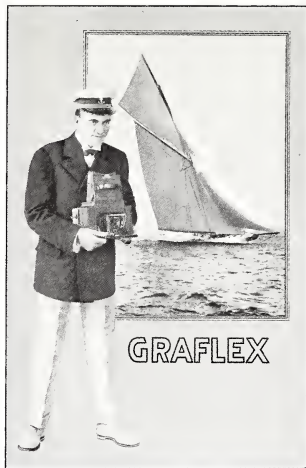
Korona Cameras

THE Korona catalog for 1914 is ready and an exceedingly varied and interesting one it is. There are several highly-meritorious additions to an already long list of good things, so that the specialist in almost any field, as well as the amateur and even the beginner, may find what he needs. The compact Pixie Roll-Film Cameras, box and folding, are too well known to require more than passing reference; likewise the Korona and Criterion View-Cameras, and the Korona Plate and Film-Pack Cameras in many sizes and with many varying adjustments. Of these latter the Korona Series V seems to be the very acme of excellence. Then there is a series of Post-Card Koronas in three sizes with reversible backs, and the Stereo Korona. Two additions to the Korona line of great interest to professional workers are a series of Panoramic View-Cameras in three sizes: 5 x 12, 7 x 17, 8 x 20; and the Korona Banquet-Camera, 12 x 20. A vertical-swinging lens-board is the most striking feature of the latter.

The well-known Turner-Reich Anastigmat and other lenses are also a feature of this catalog and so varied are the requirements they meet that a suitable lens is easily found for any Korona camera. Among the many ingenious accessories are a series of reducing-backs for using small plates with large cameras, and an enlarging-attachment in three sizes intended to convert any front-focusing view-camera into an enlarging-camera by the addition of a nest of negative-carriers.

Ensign Cameras

IN early spring you take your outfit off the shelf and upon examination you will probably find that it is out of date. Why not procure a catalog of the Ensign Cameras? These London-made cameras have scored an instant success with every one to whom they have been shown. There is a camera that fits every pocketbook, the prices ranging from \$2.25 upwards. New cameras have been added to the line for the coming year, the principal one being the Ensignette De Luxe model fitted with Zeiss lens and Compound shutter. This gives an accurate vest-pocket camera of the highest type of photographic efficiency, reasonable cost and exceptional compactness. The new 1914 Ensign catalog will be mailed free of charge to readers of this magazine upon request to G. Gennert, 24 and 26 E. 13th St., New York, 320 S. Wabash Ave., Chicago, Ill., and 682 Mission St., San Francisco, Cal.



Graflex Cameras

HANDSOME as ever and replete with many excellent and striking reproductions of focal plane photographs, the 1914 Graflex catalog has just reached us. While it describes all of the well-known models of former years, the present issue is notable chiefly for the marked price-reductions of all anastigmat lens-equipments and the announcement of a new model, known as the Auto Graflex Junior. The latter is a real Graflex, small and compact, at the moderate price of \$35.00 without lens. Its dimensions closed are 5 x 5 x 6 1/4 inches; focal capacity, 4 to 5 1/2 inches; weight, 39 ounces; size of pictures, 2 1/4 x 3 1/4. It embodies all of the exclusive Graflex features and quality of workmanship. The shutter is the standard Auto Graflex focal plane with five fixed apertures, permitting exposures up to 1/1000 second. A safety-device prevents the winding of the shutter-curtain until the reflecting-mirror is depressed.

Anso V. P.

THIS little camera is so flat, so small, that it can easily be carried in a coat- or hip-pocket ready for instant use. The six-exposure film-cartridge, 2 1/4 x 3 1/4, is a standard size in all makes of films and may be obtained all over the world. The lens is a good one, permitting excellent enlargements. One pull of the front extends the bellows by means of a lazy-tongs construction and automatically clamps it with the lens in focus for any object from 8 feet to infinity. Of metal construction throughout, the camera is covered with seal leather and the price of \$7.50 includes a soft case.

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The Miniature Polygon

THOSE who prefer to use plates or film-packs rather than roll-films, even in miniature size, will find in this camera an instrument remarkable for quality of workmanship and the number of adjustments provided. It is a large camera made small, its compactness being phenomenal. The camera is equipped with a Compound shutter, has a rising front working with a thumb-screw, a thumb-screw focusing-device with a sliding bed, a lever-locked sliding-front, solid, non-folding reversible finder, two tripod-sockets and is leather covered. Unlike most miniature-cameras it has sufficient bellows-extension to permit the use of the rear combination of the F/4.5 Rietzschel Linear anastigmat with which it is fitted, thus giving an opportunity to choose between a lens of 2 3/4 or 4 3/4-inch focus at will. Also at an extra cost of \$18.50 a telephoto-lens may be had, enlarging up to eight diameters. Suitable ray-filters and developing-tanks are also obtainable of the importer, Meyer Camera & Instrument Co., Inc., 18 West 27th Street, New York City. This miniature camera takes pictures 1 3/4 x 2 3/4 inches, measures, outside dimensions, 1 5/8 x 2 3/8 x 3 1/2 inches, and weighs 14 1/2 ounces. Few miniature cameras lend themselves to so varied requirements.

Ilex Shutters and Lenses

PROMINENT among the notable American lines of photographic goods is that of the Ilex Optical Co., Rochester, N. Y., announced on another page. The Ilex Three-Focus Convertible anastigmat is already giving satisfaction to a large number of PHOTO-FRA readers, and the merits of Ilex shutters, guaranteed against the detrimental effects of climatic changes, dust or dampness, are making a strong appeal.

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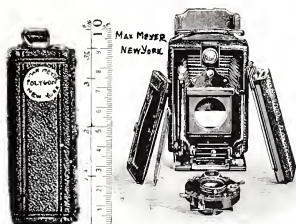
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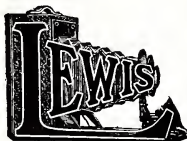
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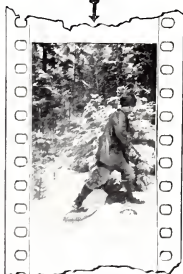
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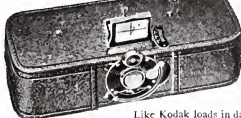
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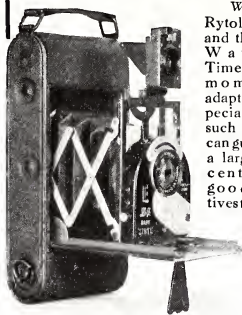
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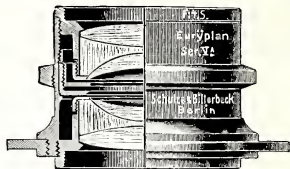
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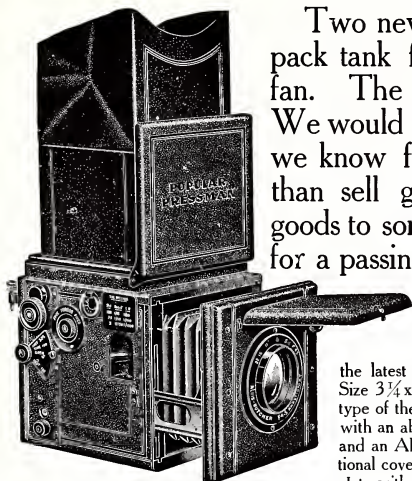
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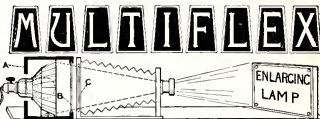
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The American Journal of Photography

Vol. XXXII

MAY, 1914

No. 5

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CONTENTS

ILLUSTRATIONS

The High Sierra from the Top of Yosemite Falls	George R. King	Cover
The Violinist	R. C. Nelson	212
Evening, Imperial Valley, California	George R. King	213
Mission San Juan Capistrano	George R. King	214
California-Scenes	George R. King	215
The High Sierra from the Top of Yosemite Falls	George R. King	216
Wild Azalea in Yosemite National Park	George R. King	217
In the Mountains of California	George R. King	218
The Monk	George R. King	219
Above the Clouds on Mt. Wilson	George R. King	220
Shore of Lake Tahoe	George R. King	220
Sunset on Lake Tahoe	George R. King	221
After the Storm	William Norrie	222
Allurement	E. E. Doty	223
Ica Atom Pictures	John Gordon, Jr.	224
A Difficult Climb	John Gordon, Jr.	224
Week-End Joys	Max Meyer	225
Fifth Avenue, New York, Snowbound	C. W. Graham	225
Ceiling, Congressional Library, Washington	C. W. Graham	226
At the Bars	C. E. Teeter	227
Ernemann Heav Views	Paul Greibig	228
Goetz Tenax Views	C. E. Teeter	229
Time for the Landing-Net	William E. Clogston	230
Aroostook Fishing-Scenes	William E. Clogston	231
Holding a Point	Howard S. Adams	233
A Canoe for Fishing, a Motor-Boat for Rapid Transit	William E. Clogston	234
Gospel Measure — First Prize, Still-Life	Fannie T. Cassidy	238
The Fallen Ash — Second Prize, Still-Life	William Ludlum, Jr.	240
Sunday — Third Prize, Still-Life	John W. Gillies	241
Ducks — Honorable Mention, Still-Life	John W. Schuler	242
Study — Honorable Mention, Still-Life	J. H. Field	242
An Old Landmark — Second Prize, Beginners' Contest	Earl A. Newhall	244
Close of Day — First Prize, Beginners' Contest	J. Satterlee	245
Ice-Capped Piles — Third Prize, Beginners' Contest	James Allan	246
Florence — Honorable Mention, Beginners' Contest	Frank Appleby	247

ARTICLES

The California I Know	George R. King	213
Cold Light	Louis Derr	222
The Choice and Use of a Miniature Camera — Part II	C. H. Claudy	224
My First Trip to Aroostook	William E. Clogston	230
The Road to Yesterday (Poem)	William Ludlum, Jr.	235



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The American Journal of Photography

Vol. XXXII

MAY, 1914

No. 5



EVENING, IMPERIAL VALLEY, CALIFORNIA

GEORGE R. KING

The California I Know

GEORGE R. KING

LOYALTY to one's state and home-city or town is a marked characteristic of the American people, and it becomes even provincialism in some sections. We all like to regard our own locality the best place in the world in which to live, and most people are prone to give expression to this feeling when away from home and among strangers from other parts of the country. Probably in no section does one meet so many persons from different parts of the country and, in fact, the world, as in the Golden State. Drawn by an impulse that has been fostered through years, they come, some for one reason, some for another; but they all feel the spell of that magic word, *California*. The attractiveness of the Pacific

Slope is many-sided. To some, the climate holds the greatest charm; to others, the possibilities of the fertile soil to produce the things necessary to comfortable living; to still others — and a very large company it is — the long season of cloudless days. And so all who visit the Coast may be set off in groups, each enthusiastic along some particular line which may afford profit, or pleasure, or both.

My California includes all the above and much more, as it must with all camera-enthusiasts. When I think California, I see a land of wonderful picturesqueness; a coast-line of unsurpassed beauty and variety, eight hundred miles in extent; a low range of mountains, back a few miles from the sea, with its fine groves of



MISSION SAN JUAN CAPISTRANO

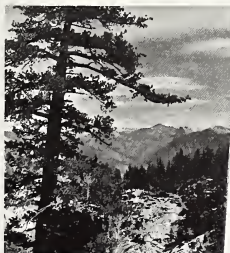
GEORGE R. KING

giant redwoods; great and small valleys of marvelous fertility; the Sierra Nevada, the most stupendous mountain-range in America, with its extensive forests belting its western slope, and the groves of *Sequoia gigantea*, its charming meadows and lakes of the high altitudes; looking down from the crest of the range I see the great desert stretching out to the Nevada line and, to crown the whole, Yosemite National Park, into which nature has crowded more beauty and grandeur than into any equal area of the earth's surface. From Siskiyou in the north to Tia Juana on the border of Mexico, it is everywhere the same vast land of beauty and magnificence.

I have spoken of my California as man took it from the hand of nature. The early Spanish settlers built their homes and houses of worship in keeping with the natural charm of the country, and the Missions stand to-day as monuments of their good taste and judgment. Only a few of these establishments remain in anything like their original dimensions. But one, Santa Bar-

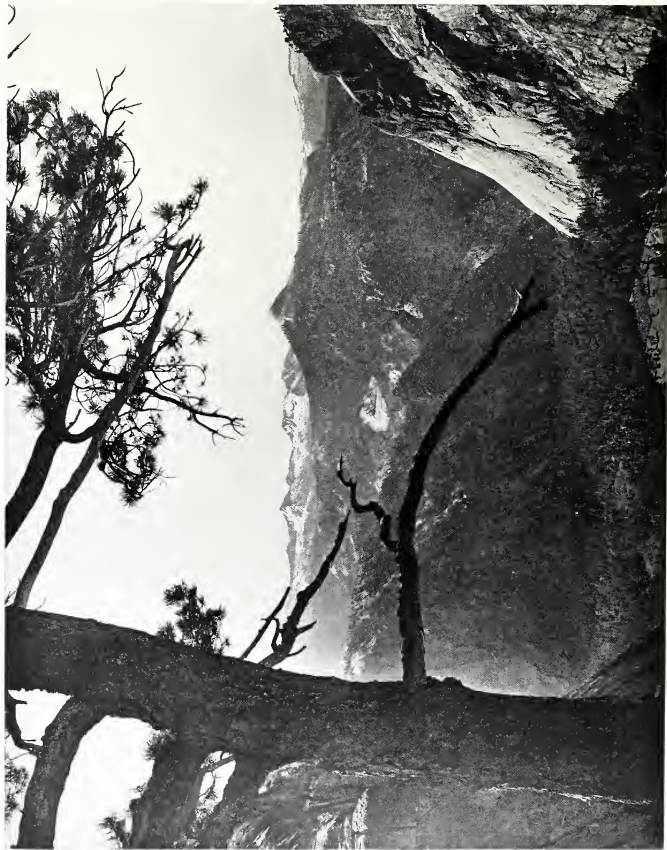
bara, is occupied as a monastery by the Franciscans; nearly all are in ruins. Here and there a pitifully weak effort at restoration is being made; but the present builders have little of the idealism of Serra and his followers who planned and erected the original structures, yet to the artist these remnants of former grandeur present great picture-possibilities. A century has mellowed their walls and arches until some of them now look as if they might have been standing a thousand years. San Juan Capistrano, between Los Angeles and San Diego, is by far the most picturesque of the Missions, and if one's time is limited, will afford all the opportunity needed to obtain a satisfying lot of pictures. San Gabriel, also very interesting, is easily reached from Los Angeles by trolley.

There are a few points along the coast which are particularly worth visiting. Ocean Beach and La Jolla, near San Diego, Laguna Beach, reached by stage from Capistrano, and Monterey Coast are most noted; the latter, to my mind, is one of the most beautiful bits of coast-line in the



CALIFORNIA-SCENES
GEORGE R. KING





THE HIGH SIERRA FROM THE TOP OF YOSEMITE FALLS

GEORGE R. KING



WILD AZALEA IN YOSEMITE NATIONAL PARK

GEORGE R. KING

world. Considered simply as a bit of rocky shore it is unsurpassed in grandeur; but add to this feature the gnarled and wind-twisted cypress-trees, then the neighborhood of old Monterey casts a spell over the visitor that is simply irresistible.

Probably more people visit California in the winter-months than during the summer; but this is because of what they escape from in the East rather than the attractiveness of the Pacific Coast at this season of the year, though those attractions are many and alluring. But the summer-months offer opportunities for camping, particularly in the High Sierra, the delights of which can never be known to the winter-visitor.

Come with me to the Yosemite National Park. Here nature has done its noblest bit of handiwork. I said something akin to that before, but it will bear repeating. Let us put our baggage on the stage and foot it in from the railway at El Portal. This is a splendid preparation for the wonders of the Valley proper. Through the ever-increasing grandeur we plod along, passing at length Cascade Fall at the very opening of the Valley. The musical roaring as it tumbles over its rocky bed greets the ear at every turn. Pines that would be thought giants in any forest of the East confront one everywhere. Through the foliage in the distance we

get a glimpse of Bridal Veil Fall, and off to the left across the valley towers El Capitan.

Fortunate the visitor who reaches this point at nightfall; he has seen enough for one day. There are a few things in the world that will keep. Sentinel Dome, Yosemite Falls, North and South Domes and the Merced River will be waiting with all their magnificence and charm in the morning, and when he has feasted his eyes on these wonders from the floor of the Valley, there are the trails that lead to the high places. Many persons have asked me how long it takes to do the Yosemite. I suppose that most tourists who visit the Valley spend one night there, going in on the morning stage, ascending the Long Trail to Glacier Point, returning next morning via the Short Trail and coming out on the evening-stage to catch the night-train at El Portal. Such persons may talk of having seen Yosemite; but they know no more of Yosemite than if they had remained outside and read pretty descriptions in railroad guide-books. John Muir knows Yosemite; but John Muir has spent years in patient study of the Valley in all its moods. A week, better a month, better still a whole summer, might be spent with camp-outfit, and a few congenial companions in making journeys on foot to the high places all about the river and beyond. Then there is the



IN THE MOUNTAINS OF CALIFORNIA
GEORGE R. KING



Tuolumne country over Vogelsang Pass; the Great Meadows; the Canyon, and the beautiful Hetch Hetchy Valley. A summer thus spent will put more wealth into one's life than Wall Street could contribute in a lifetime.

So much for Yosemite; time would fail me to tell of the big trees, Lake Tahoe, Mt. Shasta and the scores of less-noted places, not least of which is the wonderful desert-country with its wealth of peculiar vegetation and wonderful coloring, particularly at the sunset-hour. At the opposite corner of the state stand those mighty forests of redwood. When a Californian thinks of redwood, he also thinks of a bungalow — the California type of house, which nearly every American hopes sometime to occupy and which is doing as much to advertise California as her fruits. It is of redwood, for the most part, that these bungalows are built, picturesque as the state in which they stand; low, rambling, suggestive of Japanese influence and grown over with roses and round about with poppies — a haven of rest and good cheer in this land of a thousand wonders.

This is my California. In photographing it successfully, many persons imagine that the climate contributes to the making of good photographs. There are more days in which photographs may be made than in many localities, but just as good work is made in sections having opposite climatic conditions. Amateurs may make the mistake of thinking the light in California more actinic than it really is. Possibly in certain localities in midsummer a little less time should be given than in the East. But it has been my observation that negatives made by tourists are usually undertimed. In fact, I strongly recommend a tripod and time-exposures.



THE MONK

Copyright, 1913, George R. King

GEORGE R. KING

I never make a "snapshot" if possible to avoid it. Probably more than any other I make use of stop F/32. If working in the open, my time averages one second, and if foliage appears in the landscape the exposure increases two or three times. At least there is more danger of under- than overexposure.

Results depend more upon the man behind the camera than the style or cost of the outfit. Cameras of every conceivable size and style may be seen in the hands of the tourist, but I think the postcard is the popular size. However, many cameras of the reflecting-type are in evidence and also the Goerz Anschütz. Of late, one sees some of the miniature-cameras of English and German manufacture.

In my field-work I use a color-screen, particularly where cloud-effects are desired. A chang-



ABOVE THE CLOUDS ON MT. WILSON
SHORE OF LAKE TAHOE
GEORGE R. KING



ing-bag is a necessity, if plates are used. On one of my trips through the Yosemite National Park I developed my plates in a tank with great satisfaction. It was necessary also to make use of the tank for fixing the plates, and I washed them by hanging the carrier in the ice-cold water of the river. Drying plates is a problem. My method was to drive nails into the trees in such a position, about four inches apart, that a plate would rest on the nails, with the lower corner against the bark of the tree.

Of late, I have discarded plates for the Eastman Portrait-Film. I have not yet used the latter on any of my Western trips, but I shall carry a stock of them the coming summer, and anticipate no trouble from their use. It is not an easy matter to transport 8 x 10 plates far from the railroads. Two dozen plates weigh as much as a gross of films. If plates are used for field-work, means should be provided to prevent breakage. I have found it a good plan to take along negative-preservers the exact size of the plates, cut open on one side and one end. The plates may then be packed in the original box, and if ordinary care be exercised, little loss will result from breakage. Any large number of plates should be carefully packed in the original wooden case, and if one is traveling in the mountains by pack-train, they should first be turned over to an experienced packer. Nothing could be more discouraging than to see the pack slip from the mule's back to the trail, which often happens to the amateur packer.

Of one thing I am certain, only the best quality of platinum paper is worthy as a printing-medium for negatives of good quality, whatever

the subject, although this is particularly true of work made in the soft haze of midsummer in California. My advice is to make fewer negatives, add a little gray-matter to each process and spend the money saved on films or plates for good platinum paper. The results will be much more satisfactory to all concerned.

It is useless to offer advice about developers. There are more developing-agents on the market than there ought to be, to say the least, and most amateurs will try most of them in time. If I were going to Africa or South America on a hunting-trip, and wanted to get the best rifle for the purpose, I should ask the man who had been over the ground for advice. As to the matter of developers, I have noticed that the veterans of the craft, as a rule, use pyro, and it is a good developer. If you use pyro intelligently and long enough to get used to it, you will not depart from the safe path for strange gods.

1915 will be a great year in California. Thousands will take advantage of the lower rates and make the trip. Consider the "side trip," that to the Fair, and put in all the time possible in the Yosemite, among the big trees and along the rugged Pacific shore. You will never make a journey that will render the future richer in pleasant memories. Of all the sports, camping in the Sierra Nevadas during the long, dry summer-season in California is to my mind the most satisfying. Our national parks and other reservations contain the most gorgeous scenery in the world, and it should be the greatest ambition of every true son of Uncle Sam to "See America First."



SUNSET ON LAKE TAHOE

GEORGE R. KING



AFTER THE STORM

WILLIAM NORRIE

Cold Light

LOUIS DERR

IN response to an inquiry from the Editor of PHOTO-ERA with reference to the so-called "cold light," as adapted to photography, by M. Dussaud, I beg to say that its importance appears to be overestimated. There is no such thing as cold light, that is, light without heat. What is meant by the term is radiation lying wholly within the limits of the visible spectrum, and the firefly is the best example of a producer of light of this kind. In all artificial illuminants the great bulk of the energy is sent out in the form of radiations which do not affect the eye and are, therefore, invisible, but which manifest themselves by the heat they produce. If the temperature of the illuminant is raised, a larger proportion of the radiations is in the form of visible rays; but this does not stop the production of the invisible kind, it merely increases the efficiency of the illuminant by giving us a greater percentage of useful (visible) energy.

The Dussaud invention, if it be an invention, as far as I can judge from printed descriptions, seems merely to be a device for momentarily raising the temperature of a lamp-filament far above its normal working-value, in which case

the emission of useful radiations is considerably increased. Then the current is cut off, and the whole lamp cools down, to begin the process over again. If the lamp is allowed to run so as to emit a continuous light, it will get hot just like any other lamp, and, which is a practical matter, will burn out very quickly, equally like any other incandescent lamp. There is nothing of much value in all this. If you put a 50-volt lamp on a 100-volt circuit, you will get a magnificent light for a short time, but your lamp will have a very short life; and if you use several of these lamps successively, you simply get the benefit of three lives instead of one. The electricians knew this long ago. The new tungsten lamps are cooler to the touch than the old carbon-filament lamps, although the filaments themselves are hotter, the paradox being explained by the fact that the carbon-lamps disperse a much larger proportion of their radiations in the form of invisible waves than the tungsten ones do, and it is the invisible radiation which is responsible for nearly all of the heat. I do not think that the Dussaud invention is regarded very seriously. I see no prospect of its replacing flashlights.



ALLUREMENT
E. E. DOTY





ICA ATOM PICTURES



JOHN GORDON, JR.

The Choice and Use of a Miniature Camera

Part II

C. H. CLAUDY

MINIATURE plate-cameras sent for examination and comparison in this story are to be understood as so designated because normally provided with separate plate-holders. Nothing in the construction of any of them, however, prohibits the use of magazine-holders or of film-pack adapters, the latter converting the tiny instruments into film-cameras, and making the net result even smaller than those instruments already described which are regularly fitted for roll-film.

The six instruments to be discussed are, in alphabetical order:

1. The Atom No. 51.
2. The Baby Sibyl.
3. The Duchess.
4. The Ernemann Heag No. XV.
5. The Polygon.
6. The Tenax.

The Atom camera, made by Aktiengesellschaft, of Dresden, and sold by the International Photo-Sales Corporation, New York, truly deserves its name — not only that in itself it is smaller than most other instruments which make negatives $1\frac{7}{8} \times 2\frac{1}{2}$ inches, but that it carries the complete equipment of a large camera in so tiny a space. The outside dimensions are $1\frac{1}{2} \times 2\frac{3}{4} \times 3\frac{3}{8}$ inches, and in this small

bulk is a mechanism as interesting as it is simple. The mechanical art which has packed the box to the last limit of space with shutter, finder, lever, focusing-device, and which springs each part to its proper position as the camera is opened, is most fascinating. The matter is the more worthy of note in that all the mechanism appears to be not only well made but strong, and the front is as rigid when the camera is extended as if held on four extensible arms. The folding mechanism is of the "grasshopper"



A DIFFICULT CLIMB (ICA ATOM ENLARGEMENT) J. GORDON, JR.



WEEK-END JOYS

MAX MEYER

FIFTH AVENUE, NEW YORK, SNOWBOUND

C. W. GRAHAM

POLYGON ENLARGEMENTS



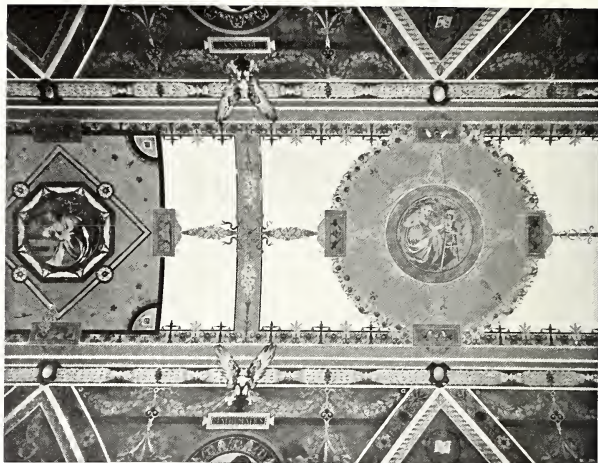
type, and quite indescribable in the ease with which it succeeds in stowing away a Compound shutter and a Zeiss-Tessar F/6.3 lens of $3\frac{1}{2}$ -inch focus.

Focusing is accomplished by a lever-motion working in the vertical plane with a pointer against a small scale. The finder and lever are directly beneath the lens, so that one looking at them sees also the scale at the same glance.

A ground-glass in a sliding-panel back, provided with focusing-hood, two tripod-sockets, and three metal plate-holders for single plates in partitioned pocket-case, make up the outfit, the total weight of which, with three plates, is not quite 19 ounces.

Of the Baby Sibyl, made by Newman and Guardia, of London, and sold by Allison and Hadaway, of New York, all that was said of the Baby Sibyl for films can be said here, so far as its good points are concerned. In addition, in this model, which makes negatives $1\frac{5}{8} \times 2\frac{1}{4}$ inches, the finder is made of the oblong reducing-lens type with a peep-hole sight on the camera-body. Furthermore, it is made to fold automatically, as the camera is folded up, so that there is no danger of careless closing injuring the projecting parts. The folding-mechanism is applied to both peep-sight and finder proper, is simple, practical and efficient, as well as certain. An aluminum ground-glass holder slips out to enable the plate-holders to be slipped into position.

The camera comes in a handsome leather case, provided with six plate-holders of black metal, consecutively numbered. They hold, of course, but a single plate each. The camera alone weighs 9 ounces, the six holders and plates weigh 8 ounces, and the case tips the balance at 5 ounces, a total of 22 ounces for the outfit. It is certainly beautifully made and



CEILING, CONGRESSIONAL LIBRARY (POLYGON ENLARGEMENT) C. W. GRAHAM

finished. Like its sister for films, the plate Baby Sibyl has a winker shutter, a Zeiss-Tessar lens, F/4.5, of 3-inch focus and friction-held rising- and sliding-front. But the plain lens-finder does not lend itself to the adjustable-finder construction, which is a feature of the film-model.

The Duchess, made for and sold by G. Genert, of New York, is a focal-plane camera, and one with some very interesting features. It makes negatives $1\frac{5}{8} \times 2\frac{1}{4}$ inches in size, but it has all the adjustments and capacities of a large focal-plane instrument. Like the Vest-Pocket Kodak, this instrument has a front extended on lazy-tongs, although here but a single pair rigidly supports the front and lens. Unlike the Kodak, this extension-arm is supplied with a focusing-device. Turning a milled wheel on the body of the camera extends or retracts the front by means of a rack and pinion movement placed vertically in the camera and working through the extension-arms. The lens, a Zeiss-Tessar of F/4.5 opening and 3-inch focus, is provided with a levered diaphragm-adjustment. A reversible and collapsible finder completes the front-board equipment.

The shutter, which is of the safety type, is extremely smooth-working. It is provided with five adjustments by means of a milled knob, giving slits from full size to one-eighth of an



AT THE BARS (GOERZ TENAX ENLARGEMENT)

C. E. TEETER

inch. It has two spring-speeds, use of which is controlled by a lever, yielding a total of ten shutter-speeds, ranging from $\frac{1}{2}$ second to $\frac{1}{2500}$ second. The very slow speeds are unusually smooth-working, accurate and positive, and give the little instrument great range and capacity as a hand-instrument. Means to adjust the shutter for time-exposures, as well as a tripod-socket, are provided. A ground-glass back, with tiny, folding extension-hood, suggests pictorial composition; pictorial-workers do not use focal-plane instruments, as a general rule, and record-workers in the speed-field have little use for ground-glasses and hoods, unless they be in reflecting-cameras.

Plate-holders come three in a folding pocket-book — probably the user of the Duchess will equip himself with several and thus distribute the slight weight about his person. The camera weighs 18 ounces alone, and the three holders, plates and case not quite 6 — again a total of 22 ounces. It is somewhat confusing to give dimensions of this instrument, on account of the projecting shutter-winder on one end and the projection of the diaphragm-lever on the front. But for them the instrument would fit tightly in a box $2\frac{1}{4} \times 3\frac{1}{4} \times 4\frac{1}{4}$ interior dimensions.

The Ernemann Heag No. XV, made by Heinrich Ernemann Aktiengesellschaft, of Dresden, and sold by Hoffman & Bader, of New

York, is a plate-instrument making pictures $1\frac{3}{4} \times 2\frac{5}{16}$ inches. It is of the "grasshopper" or erecting-type, of which something has already been said. A single motion opens the camera, pulls out the front, locks it firmly ready for picture-making at infinity, at the same time unfolding and presenting the collapsible finder. The little instrument, which weighs but a trifle more than 10 ounces, is extremely compact, measuring $1\frac{1}{4} \times 2\frac{1}{2} \times 3\frac{1}{2}$ inches. It is fitted with a Zeiss-Tessar work-

ing at F/6.3, of $3\frac{1}{2}$ -inch focus, provided with a three-blade shutter of German manufacture, with an unusually smooth-working and effective retarding-device for the slower exposures. It is of the setting or non-automatic type. Focusing is accomplished by a lever working at the right of the camera, which by a cam-movement slides the entire skeleton-bed on guides, thus providing a very smooth and rigid movement of value for accurate focusing.

The back of the camera is fitted with a ground-glass and light-hood, which must be removed before inserting the metal plate-holders, three of which come with the camera. The shutter is operated either by thumb- or an antinous-release ingeniously attachable to the base of the camera and hooking over the finger-release. The instrument is well made and finished, leather-covered, heavily nickeled and provided with two tripod-sockets for vertical or horizontal compositions.

The Polygon camera is manufactured by A. Heh, Rietzschel, of Munich, and is sold by Max Meyer, of New York. It is a plate-instrument to which a film-pack adapter can be fitted, and is a somewhat large instrument made small rather than a small instrument *per se*, since it has a long draw for using the rear combination of the F/4.5 Linear anastigmat with which it is fitted, thus giving the owner the opportunity



to choose between a lens of $2\frac{1}{2}$ - or $4\frac{1}{2}$ -inch focus at will.

The instrument makes negatives $1\frac{7}{8} \times 2\frac{1}{4}$ inches. It is equipped with a Compound shutter, has a rising front working with a thumb-screw, a thumb-screw focusing-device with the familiar sliding bed, a lever-locked, sliding front, solid, non-folding, reversible finder, two tripod-sockets, and is leather-covered. The method of retaining plate-holders and ground-glass back is different from most cameras. Instead of sliding in place, as is usual, the top sliding guide hinges back slightly by means of a small lever. The plate-holder or ground-glass back is laid in place and the small lever released. A spring comes into play and the edge clamps either ground-glass back or plate-holder rigidly in place. The ground-glass holder has a glass as readily removable as a plate from a holder and a small focusing-hood. Six plate-holders in two pocket-book cases and one film-pack adapter with the camera form a complete case full. The camera weighs, complete, $14\frac{1}{2}$ ounces—in the case with six holders and film-pack adapter, the whole tips the scales at 2 pounds. The camera is in exterior dimensions but $1\frac{5}{8} \times 2\frac{3}{8} \times 3\frac{1}{2}$, although it possesses a draw of 7 inches.

A unique little telephoto lens is supplied in an extra case, to be fitted behind the regular lens, which, with its shutter, is upon a spring-actuated metal front-board. A so-called pocket-tripod also comes, that the instrument may be supported on fence-posts, tree-stumps, etc. A very small and neat darkroom-lamp and a well-made plate-tank are also supplied expressly for use with the Polygon instruments.

The Tenax, made by C. P. Goerz, Berlin, and sold by the C. P. Goerz American Optical Company, of New York, is an instrument of the extensible-arm

type, making negatives $1\frac{3}{8} \times 2\frac{1}{4}$. Four straight arms, without joints, and provided with turned ends working in slides, support the front. The arms are spring-actuated, so that pressure on a button opens the camera, which is then ready for use. Focusing is effected by means of a graduated milled head, reading to yards, on the box-body, which moves that member away from or towards the lens, no reliance being placed upon flexures of the movable arms to accomplish minute motion with accuracy.

The shutter, concealed in the extensible front, is of the three-bladed type, having to be set for each fractional-second exposure, but not for time or "bulb" work. Two dials, flush with the surface of the front, give diaphragm-adjustment and speed-readings from one whole second to $\frac{1}{250}$ second. A reducing lens-finder is recessed into the front, folding flat out of the way, so arranged that it cannot be injured or bent if the instrument is shut up carelessly.

The camera comes regularly supplied with a Goerz Dagor lens, working at F/6.8 of 3-inch focus. It is provided with the usual sliding ground-glass back, which in its turn is supplied with a very neat folding focusing-hood, spring-actuated, which flies open at a touch and is locked with a thin steel strut. The camera is supplied with a carrying-case of black chamois made like a lady's pocket-book, and a second filled with six plate-holders completes the outfit. These plate-holders are single, but of the book-type, the backs, which are lined with black cloth, opening to admit the plate. The total weight of camera, plate-holders, two cases and six plates is 28 ounces, of which the camera alone accounts for 14. Its dimensions are $1\frac{1}{4} \times 3 \times 3\frac{3}{8}$ inches over all. Its deeply-recessed lens, rigidity, small size and fine workmanship have all combined to make it very popular.

(To be continued)





TIME FOR THE LANDING-NET

WILLIAM E. CLOGSTON

My First Trip to Aroostook

WILLIAM E. CLOGSTON

WHEN a man gets up twice in one week at three o'clock in the morning, walks two miles to the office to lock the safe, only to find everything as it should be; complains every morning about his coffee; comes home every night with a throbbing headache, and finds everything just the opposite of what he desires, it is time to go fishing. How do I know? I will tell you. When my long-suffering wife finally insisted that I consult the family physician, who is a man learned in the ways of the world, as well as in the ways of medicine, he asked many questions, some of which I thought rather impertinent; he thumped my chest and my back, looked at my tongue, felt of my pulse, and then, settling back comfortably in his chair, he asked: "What was the best time you ever had in all your life?"

I thought a moment and then answered unblushingly: "My last day of school; I played truant and went fishing."

"That's the answer," he said laughing. "You don't need drugs, you need a vacation; need to play truant from your business and go fishing. Start along as soon as you can, and when you come back, call in and we'll swap fish-stories."

I found myself on the sidewalk, feeling somewhat dazed and perhaps a little buncoed, having paid the usual examination fee, when whom should I meet but Browning, an acquaintance

at the Camera Club. Now Browning was not only an amateur photographer of considerable skill, but he had a reputation second to none as a fisherman, so I quickly seized hold of the lapel of his coat and gave proof of my craziness by inquiring: "Is there any good place around here to go fishing?"

"Sure!" said he. "Boston harbor is full of fish; what's the matter?"

That "What's the matter?" was all the encouragement I needed, and I told my troubles from beginning to end like a prattling child. To my joy Browning said he was going up into the Aroostook country on the morrow, and in ten minutes I had arranged to accompany him.

In my excitement I hastened to a sporting-goods store and made known to a salesman that I was about to go fishing. That was enough. Suffice it to say that he sold me everything I did not need, but very little that I did need. And then, in accordance with the sales-policy of the store, he passed me on to a young man in the photographic department, after suggesting the fact that there was a special sale of slightly shop-worn instruments that day. This salesman was little less enterprising than the first, but as I already had a Model Four Ica Film-camera, I was resolute and bought only six rolls each of Vulcan and Ansco film; the former because I knew its merits from experience, and the latter to try, having heard of its



AROOSTOOK FISHING-SCENES
WILLIAM E. CLOGSTON



splendid qualities. The idea of a roll-film camera for fishing, hunting and all camp-outings has always appealed to me because it is so compact and convenient at a time when space is at a premium and all possible weight must be eliminated. Then, too, there are the daylight-loading and development advantages which ought not to be overlooked, for they render it an easy matter to make sure of satisfactory negatives before leaving any locality. By this I mean that development "on the spot," so to speak, gives an opportunity to try again for better results with the first failures as a guide.

Upon returning home I was just in the midst of explaining the mysteries of the varied assortment to my admiring wife when Brownie called. It was well that he came when he did, for I was getting tongue-tied and red in the face trying to think up names for about five dozen trout-flies that I had never seen before in my life. Brownie did not say much — that is, very much! He looked at a mammoth steel rod I had purchased and remarked dryly that it would be "just the thing for salmon," only there were no salmon where we were going. His comment about my four and one-half ounce fly-rod was that it seemed to be "a peach," but trout were not rising to flies so early up there. In this way he went over my entire outfit, item by item, and then told me to buy a seven-foot rod, two hundred yards of good oiled-silk line and two small spinners. One of my reels he said would do; also that he had a good big landing-net which would answer for both, so I need not bother about the small ones in my collection. Meanwhile my wife never once said, "I told you so." Surely she is a "brick."

The Aroostook country, upon which all my thoughts and hopes were now centered, is the northernmost county of the state of Maine, and noted for its wild scenery, lakes and streams, for its game and fish. Studying the map of the "New England Vacation Resorts," a booklet issued by the Boston & Maine Railroad, I found that my stamping-ground was the Grand Lake region situated in the extreme eastern part of Maine, near the province of New Brunswick, and that it could be reached from Boston, via Portland, Bangor and Mattawamkeag, all rail; or from Boston or Portland to Bangor by boat, thence by train to Mattawamkeag, thence by stage to Grand Lake — one of a chain of six lakes, where the newcomer will be met by a guide usually engaged in advance. The Maine Central Railroad issues every year a reliable directory of guides, a copy of which can be had free on application. Suitably equipped and in a happy frame of mind,

I left Boston at 6.30 the following evening. Awakened at 6 A.M. by the Pullman porter, two mornings later, we soon found ourselves once more on a station platform up in the wilds of Maine. I scarcely had time to look about me, when Brownie drowned the noise of the departing train with a "Hello, Jim!" and I found myself looking up into the smiling face of a man six feet four in his moccasins.

Upon being introduced, I was mentally comparing him to a stuffed string. He, however, did his thinking aloud, for he at once dubbed me "Baldy," with an apologetic: "I didn't just get your name." And strange to say, I didn't mind it, for the very air seemed to breed a spirit of familiarity, and as we hastily tumbled bag and baggage behind Jim's span to be whisked over to the "Tavern" for breakfast, a feeling of buoyancy and carefree boyishness crept over me that I had not felt before in years.

A homely but substantial meal was provided for us, presided over by a boniface who told us almost in the same breath that his ancestors came from France and that we were sure to make a record catch up at Jim's.

Soon we were off on the last lap of our journey, an eighteen-mile drive straight into the wilderness, where even the screech of a locomotive could not reach us, and the hum of electric cars and rattle of pavements will be unknown for years to come. A drive through such country in June, the best month of the year in New England, is always a treat to a tired city man, be he fortunate enough to get it, and this was no exception. It seemed as though I could ride on indefinitely, absorbed in the wonders of nature as they were spread out before me and also in the marvelous skill with which Jim handled his horses. A deer burst through the bushes, crossed the road in front of us and disappeared before I could even reach for my camera. Brownie emitted a suppressed "Ah!" Jim a chuckle, while I said not a word, but the expression of my face made them both laugh heartily. A short ride further and, almost to my regret, we were at Jim's door — his "hotel," he liked to call it.

"Now hustle, fellers: get into your clothes and we'll have trout for dinner. The canoe's ready and I'm waiting," was his cheery remark as he deposited our bags in the room he had set aside for us. We needed no second invitation.

The stream that runs near Jim's place, like many others, is made up of a series of what are called "dead-waters." The lumber kings, who own practically all of a great many townships

in this region, build dams on some of the smaller ponds or dead-waters to facilitate the floating of logs down to the larger rivers and so on to the mills.

As we settled ourselves in the canoe and started out into the sluggish stream between two great rows of forest, it seemed hard to believe that the sound of the lumberman's ax had ever been heard there; and, in fact, it had not for several years. My first trout was slow to appear, but Jim's promise was kept, for Brownie captured three speckled beauties. And with not even a nibble to my credit I was happy—happy just to feel that I was free. And because I showed no resentment at an unkind fate, I know I won Jim's heart.

After dinner he took me aside and showed me a small trolling-spoon exactly like the one I was using except that the gang of three hooks with its accompanying feathers had been removed and a good-sized snell trout-hook substituted.

"Try that, an' bait it with worms," said Jim. "It may not be 'cording to Izaak Walton, you fellers talk about, but us way-backers catch fish that way."

I tried it, and that night I had the laugh on Brownie.

Later, as we sat around the "Bear's Den"—Jim's office—and discussed the day's fun and the trip for the morrow, I had the satisfaction to watch Jim rig his spoon according to the formula of the "way-backs." It is a simple little trick that any guide will show you, and well worth knowing.

This was but the first of several evenings spent before a cozy open fire which was by no means uncomfortable in this northern forest early in June. And let me assure you that these evenings were not the least of the joys of the trip. Each man tried to outsmoke his neighbor, and each man tried to—but why get personal? Perhaps the sportsman who, long before our visit, nicknamed Jim's office had his reasons; but, casting aside all insinuations, the planning and anticipation of a trip, even though it be but for the morrow, is easily a third of the joy of the trip itself. Each day is different and a joyous occasion, even though you cover the same ground and indulge in the same recreations. In this land of health and sport, however, one covers the same ground twice only from choice, for there are always new streams to fish and new woods to explore.

Meanwhile my camera was a never-ending source of enjoyment to us. It went with us everywhere, slung over my shoulder by a strap when walking, and always within reach in the



HOLDING A POINT

HOWARD S. ADAMS

canoe. Many exciting and amusing scenes it pictured, some of them of no general interest or great beauty, but I prize them as reminders of my best vacation. Sometimes the exciting moments came in quick succession, but with a roll-film camera I was always ready for them and my Compound shutter, working at $\frac{1}{150}$ second, I found plenty rapid enough to stop all motion even in close work. My lens, an F/6.5 Cooke, proved itself to have exceptional light-efficiency, and most of my negatives were fully timed, even under adverse conditions. Most of the subjects were made in the open, either from a canoe on the water or in the clearing about the camp, and, thanks to the clear atmosphere and bright light of June, I was able, with lens at full opening, to obtain fair timing even under the trees. So good was the tonic effect of the trip, that I soon was able to give $\frac{1}{10}$ second exposure without a tripod, and that is "going some" for a nervous man.

The most bothersome thing was to ensure sharp focus, for distances are deceiving on the water. However, I had taken my transfer-box and tank along and every night developed the exposures of the day, thereby profiting constantly by mistakes. That I found both the Vulcan and Ansco films eminently satisfactory is shown by my results, which appeal to me as being at least fair. They were developed with Tabloid Rytol, and to appreciate the real worth of developers in tablet form for the tank, one must use them in camp where conveniences are at a premium.

But to return to the matter of focus, I tried the first day to approximate distances accurately and set the scale accordingly; but made several errors and lost pictures thereby, as I found that night upon developing them. Then the word *hyperfocal* came into my mind and I read up on the subject in my little red diary. As my lens was of $6\frac{7}{8}$ inches focus, virtually 7 inches, I found that the hyperfocals were 50, 36, 25 and 18 feet respectively for F/8, F/11, F/16 and F/32, and that with the scale set to the hyperfocal distance for the diaphragm in use the greatest possible depth of definition would be obtained from half the hyperfocal distance to infinity with the most critical definition at the hyperfocal distance. Working on this basis next day, every picture proved to be in good focus. This I found a great help in photographing one canoe from another. When photographing from one end of the same canoe to the other end there was no difficulty, for I knew the entire length and had measured the distance between the seats. If others find it less easy to approximate distances on water than land, these suggestions may prove of value.

I have always been glad since that initial trip—for we have made several trips since—that I had a fellow like Brownie with me. It was he who taught me that fishing consists not in the outfit but in the use of it; it was he, also, who taught me that the true sport of fishing

lies not in striving to catch as many fish as possible, but in taking in a sportsmanlike manner what are needed and can be used, always remembering that there are other days to come.

With Brownie to direct, the most pessimistic fellow that ever left his fireside could suffer no monotony. We spent half a day watching two hedgehogs and a weasel in an old deserted camp; a whole day exploring a stream that we had reached after a six-mile "hike" through the woods without even wetting our lines, but we enjoyed every moment. We went back to that stream and fished on the day before we left Jim's place and made a record, too. It happened like this. I was in the bow of the canoe, Brownie in the middle, and Jim in the stern with the paddle when I "got a strike" and shouted to Jim to get his net ready. As I started to reel in my little fish, Brownie sang out "Gee! I've got a snag. No, I've got a whale! Hurry up, you fellows, and clear the deck!"

There was no need to hurry, though excitement must usually have expression. It was fully fifteen minutes before the trout was within reach of Jim's net. My heart was in my mouth during most of its journey, and when it was hung up on Jim's scales it weighed $4\frac{1}{4}$ pounds—the biggest fish of the trip "that didn't get away."

And so the days slipped by; not every day was a fishing-day, not every day was a record-catch; but every day furnished enjoyment good and wholesome so that it was with a heavy heart that Brownie and I counted these days and found that the doctor's prescription had been used up.

All this was three years ago, but every spring finds me lingering over my morning coffee with a far-away look in my eyes until "the Mrs." notices it and suggests that I need a change. Not long afterward Brownie and I can always be found shaking hands with Jim down in the Maine woods and refilling the prescription.





The Road to Yesterday

WILLIAM LUDLUM, Jr.

Where leads "The Road to Yesterday"?	Where leads "The Road to Yesterday"?
Across the field of fancy spread	Your pallet hold, your brushes grasp,
Fair visions of the past, array,	And paint the picture of today
And marshal by with fairy tread.	With colors borrowed from the past.
Roam once again the emerald fields;	The rosy hues of youthful dreams
Breathe deep the magic atmosphere;	Will tinge the somber-colored Now,
Renew the joy that freedom yields,	'Till happy recollection seems
Forget the passing of the year.	To lave the pain of throbbing brow.
Be young again, and fancy free	Where leads "The Road to Yesterday"?
To conjure up each happy day.	In Memory's shrine it holds a part
Come, bid your present longings flee	To heal the sorrows of today,
While memory's children laugh and play.	And still the pain of breaking heart.
Forbid the tear that glistens there;	Your prayer should every evening speed,
Heed not some shattered present joy;	"O! gracious God! Let memory play,
Look back across the vista fair	And linger in the path that leads
When you were but a little boy.	Along "The Road to Yesterday." "

Nature-Photography for Everybody

LANDSCAPE-PHOTOGRAPHY, pure and simple, has charms all its own. It affords great opportunities for pictorial work where the camerist may realize his highest ideals. On the other hand, nature-photography is more diverting, exhilarating and varied, and often enables the camerist to exercise his artistic skill. Therefore, the camerist who is eager to penetrate the mysteries of the woods and fields should lose no time to learn how much of perpetual interest nature has in store for him, and then go forth with a watchful, discerning eye and a suitable photographic equipment.

No better preparation for this delightful, diversified activity can be recommended than the perusal of "Photography for The Sportsman-Naturalist," which exhaustive volume we have had the pleasure to review in April PHOTO-ERA. Mr. Brossell, the author, ascribes his love of natural history to the camera. He exhorts the huntsman to abandon the rifle and the trap in favor of the photographer's equipment; to preserve rather than to exterminate; to protect and not destroy. The camera, used thus, arouses man's nobler instincts and faculties—observation and patience, courage and sympathy. There are unlimited opportunities to contribute to the world's knowledge of ornithology, entomology, botany, mycology and other branches of nature-science; but they are secondary to the actual pleasure of uncovering nature's mysteries, the sympathetic understanding of haunts and habitats, the search of the material, the preparation and approaches, and the making of the records.

Albums filled with the results of efforts such as these are just as interesting, instructive and gratifying as the finest product of the taxidermist's skill. The time to begin active interest in nature-photography has arrived; awakening nature gives the sign.

The Tariff on Imported Cameras

OWING to the lack of definite information in various quarters regarding the actual duty on cameras of foreign manufacture, it was stated editorially in April PHOTO-ERA that it was twenty-five per cent. This rate appears to have been derived from paragraph 386 in the

new tariff, according to which an article of foreign manufacture, composed of two or more materials paying different rates of duty, would be assessed at the highest of such rates. From this it would appear that as in a complete camera—of the folding- or the box-type—the camera proper paid fifteen and the lens twenty-five per cent, the entire equipment exacted a duty of twenty-five per cent. Nevertheless, foreign cameras have been imported by New York dealers and brought in by travelers returning from Europe, in some instances, at fifteen and in others at twenty-five per cent *ad valorem*, according to the interpretation of the new tariff.

In view of the apparent diversity of opinion on the subject, we obtained a definite decision from the Treasury Department, United States Customs Service, according to which cameras (including the lens belonging to and attached to the camera) are dutiable at fifteen per cent *ad valorem* under paragraph 380 of the present tariff. The provision for photographic lenses covers lenses imported separately and not adjusted to cameras.

The Latest Fad in Advertising

WHEN a fashionable milliner engages the services of a handsome and popular actress to demonstrate a new hat or a new corset, and creates a sensation—equivalent to highly effective publicity—one wonders what the photographic dealer is doing. To tell the truth, he is very quiet, and complaining of dull times. Of course, he does not advertise. If he were really alive, he would hire a well-known professional beauty and give public sittings by flashlight in the interest of a high-class pocket-camera. Properly advertised and tactfully managed, such sittings should fill the dealer's store to overflowing. Or has any one heard of a choice concert or other delectable entertainment given at some fashionable portrait-studio during the past winter? Just think, what glorious opportunities for refined and successful publicity have been neglected! Of course, a policy of caution suggested by the old saying, "Fools rush in," is a good one to adopt. It is not prudent to attempt any advertising-exploit, even an engraved invitation or a printed folder, unless it can be done in a highly creditable manner.

PHOTO-ERA MONTHLY COMPETITION

For Advanced Photographers

Closing the last day of every month. Address all prints to PHOTO-ERA, Monthly Competition,
383 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. If preferred, the winner of a first prize may have a solid silver cup, of original and artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unadvised work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. **Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind, or with thin wood-vener. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value. Persons interested to have one of these PHOTO-ERA prize-collections shown in their home-city will please communicate with the Editor of PHOTO-ERA.

Awards — Still-Life

Closed Feb. 28, 1914

First Prize: Fannie T. Cassidy.

Second Prize: Wm. Ludlum, Jr.

Third Prize: John W. Gillies.

Honorable Mention: F. E. Bronson, J. H. Field, Mrs. C. B. Fletcher, Franklin I. Jordan, Alexander Murray, J. W. Schuler.

Special commendation is due the following workers for meritorious prints: Harry Beeler, Percy I. Booth, A. D. Brittingham, Nick Bruell, L. F. Carna, S. H. Gottscho, J. Upton Gribben, Wm. Haedrich, Jr., Bertran F. Hawley, F. W. Hill, Suisai Itow, Emil G. Joseph, Peter J. Kluesing, Oscar C. Kuehn, W. Kyle, C. A. Peterson, Joseph V. Phelan, Chas. S. Ronlo, P. G. Russell, A. S. Workman.

Subjects for Competition

"Flashlights." Closes April 30.

"Growing Flowers." Closes May 31.

"Telephoto-Work." Closes June 30.

"Landscapes." Closes July 31.

"Outdoor-Portraits." Closes August 31.

"Waterscapes." Closes September 30.

"Indoor-Portraits." Closes October 31.

"Decorative Applications." Closes November 30.

"My Home." Closes December 31.

"Winter-Scenes." Closes January 31.

"General." Closes February 28.

"Flashlights." Closes March 31.

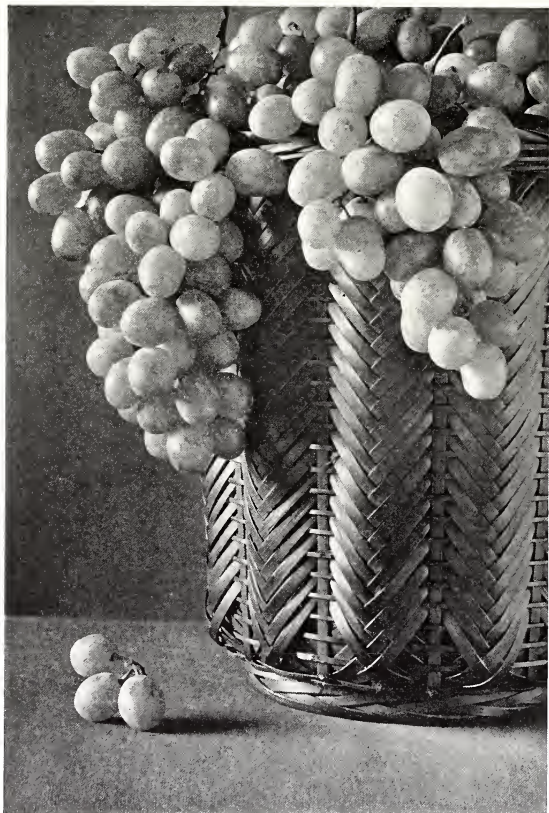
"Interiors with Figures." Closes April 30.

"Street-Scenes." Closes May 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the publisher will give them the choice of photographic supplies to the full amount of the prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.



GOSPEL MEASURE
FANNIE T. CASSIDY
FIRST PRIZE — STILL-LIFE



Telephoto-Work — Photo-Era Competition

Closes June 30

It is commonly supposed that only the advanced worker can be expected to show much in the way of successful telephotographic work, but with the advancement made in present-day apparatus any one with an ability to follow directions and an "infinite capacity for taking pains" should be able to show creditable results.

It is not a method to be used indiscriminately, or where other means will give satisfaction, but it is invaluable in obtaining a certain class of pictures otherwise inaccessible. How many times one sees an attractive view which, although pleasing to the eye, is so dwarfed by distance that a photograph shows almost nothing of its beauty. On a nearer approach the best viewpoint is lost, perspective exaggerated, and nothing worth while can be obtained.

In order to get a satisfactory picture from the distance, a large and expensive lens would be required and a camera of unwieldy bellows-extension. It is in such cases that the telephoto-lens helps one out of the difficulty. Perhaps a view is to be taken of some hotel or cottage built upon the shore of a lake. The best view is the water-front, but there is not space between the building and the water to give the needed perspective, and to work from a boat is most precarious. The only alternative is to take the view from across the lake. Here the view of the buildings is ideal, but with the ordinary equipment the resulting picture would show a vast expanse of sky and water with the tiny group of buildings hardly noticeable.

Of course, there is the method of making an enlargement from the small image, but as great a degree of enlargement as this would require for a picture of satisfactory size would show great granularity and loss of detail.

With the same camera and lens aided by the telephoto-attachment a picture can be obtained from the same viewpoint that will show the buildings as prominently as one pleases. This telephoto-attachment consists of a long lens-tube in the rear of which is a negative or magnifying-lens. Into the front of this tube is to be screwed the ordinary positive-lens and shutter with which any view-camera is equipped. The effect of this negative-lens is greatly to increase the focal length of the original lens, so narrowing the angle of view and greatly increasing the size of the image. The tube is usually so constructed that the distance between the two lenses can be varied to govern the size of the image obtained. On account of the long lens-tube and the likelihood of reflections it is wise to use a rather long and close lens-hood to cut out any side-lights from the lens.

The matter of focus is an important one and requires more than ordinary attention. The focusing-cloth should be held tightly to exclude all light and some point where detail is most easily observed should be focused as sharply as possible. The rigidity of the tripod and camera are also important, for when so narrow an angle is included, the least variation in the camera will make a big difference in the image, and the weight of the extra lens and tube makes it very susceptible to any jar or vibration.

When far-distant views, such as mountains, are to be greatly magnified, the effect of the intervening atmosphere must be taken into account, as it flattens the resulting negative very greatly, and a time of day should be chosen when the light and shade are at their strongest. Sometimes heat-waves will cause a wavering of the

image which makes an exposure impossible. This will be readily detected in focusing and another time must be chosen, preferably late in the day.

It should be borne in mind that the increased focal length means also lengthened exposure, but the effect of the atmosphere in shortening exposure increases with distance and a table of relative exposures may be helpful.

When the distance from the nearest object is:

10 to 40 feet	give normal exposure	
40 to 125 "	divide "	by 2
125 to 400 "	" "	" 4
400 to 1300 "	" "	" 8
1/4 mile and beyond	" "	" 16

For very distant work it is best to use isochromatic plates and a color-screen.

As the tendency is toward flatness, it is wise to use a strong-working developer, such as hydroquinone with plenty of bromide to give plenty of time for the developer to obtain all possible contrast.

The possibilities of this process are numberless once its technicalities are mastered. What a wealth of otherwise inaccessible detail can be searched out in the carvings of old cathedrals or in Nature's carvings, such as the "Old Man of the Mountains," whose very identity is lost on close inspection.

In a modified degree telephotography has now been adapted to the use of the man with the hand-camera. In the *American Annual for 1914*, Mr. Gordon Belmont describes his success with a 17-inch F/5.4 telecentric lens used on a 5 x 7 focal plane, reflecting hand-camera.

This equipment must be decidedly heavy to hold and operate, but it puts in the hands of the press-photographer an ideal instrument for his work. With it, sharply-defined, instantaneous pictures can be made of three times the size obtainable with the ordinary type of lens.

In PHOTO-ERA for December, 1908, Mr. John W. Turner describes the Miograph telephoto-camera perfected by Mr. Hollister, and of a similar construction to the foregoing. This sort of equipment makes it possible for the enthusiast to obtain from the grand-stand fair-sized photographs of his champion baseball-player in action; of his favorite race-horse taking a high hurdle or the neck and neck finish of a close race.

For the hunter of wild beasts or birds in their haunts, nothing else could give such a large and satisfactory image at the long distance required by the timidity, or ferocity, of the subjects to be caught. The war correspondent so equipped would find himself able to keep under cover and still obtain pictures which otherwise would have required the risk of life and limb. Even the soaring aeroplane, a camera-subject every day becoming more common, is brought within his powers.

For the long-distance worker, these suggestions are offered in closing:

Work only on clear, still days and at a time of day when the shadows are strong and pronounced.

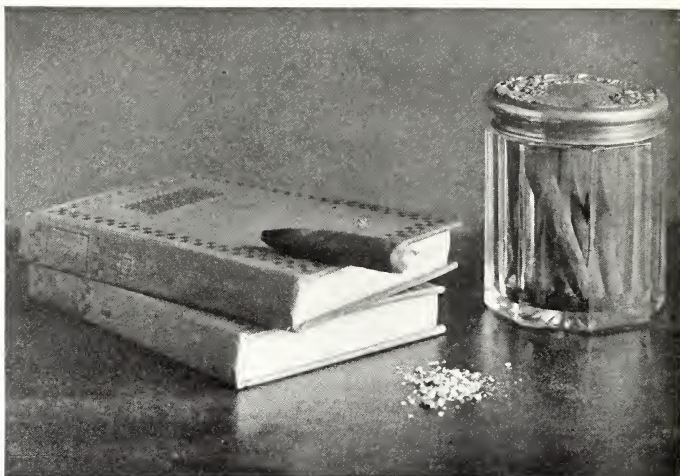
Be sure the tripod is rigid.

Avoid overexposure.

Develop strongly and fully.

Photographing Bullets

If a photograph of a speeding bullet could be taken, the print would probably show a space like a body of water marked by what look like speeding water-bugs, each having a ripple in its wake. Photographs of projectiles have been snapped in time of peace, but it is doubtful whether the camera ever caught one as it sped on its mission of death. A bullet speeding at the rate



THE FALLEN ASH

SECOND PRIZE — STILL-LIFE

WM. LUDLUM, JR.

of 3,000 feet a second, which is more than 2,000 miles an hour, makes a great disturbance in the atmosphere and creates air-waves, which, of course, are invisible to the naked eye.

If you draw a stick through the water, it causes little eddies and waves to trail behind it. The faster you draw the stick the more waves and the wider the angle it will leave. The slower the stick is drawn, the fewer waves. Just so the bullet. If it is traveling slowly, no waves can be photographed, as apparently there are none. It is only objects traveling at a terrific speed that create any appreciable air-waves.

Photographs of a bullet going at a rate of speed less than 1,200 feet a second show no air-waves at all. This is an interesting, scientific discovery. But anything which cuts through the air at a greater rate than this, disturbs the atmosphere to such a great extent that air-waves are formed and can be photographed.

Silhouettes

AMONG the arts and crafts of our grandparents that the present day is reviving is that of the old silhouettes.

In the olden days these were made by cutting the figure from black paper and mounting it on white, or sometimes cutting the opening in the white paper and putting the black behind.

The present-day silhouette, however, is made with the camera and is a very interesting process.

There are two ways in which this may be done. The first and most common way is that of hanging a white cloth in front of a window or door and excluding all other light from the room. The sitter is then posed in profile in front of this white ground and the image sharply focused.

The second and better way is to place two dark screens parallel to one another and the source of light. Throw a dark cloth over the top, forming a dark tunnel. At one end place a white ground at such an angle as to catch the full light from the window. Then pose the subject between the screens and in such a way as to catch no light from any source. Focus the profile sharply and expose for the white ground. You will be surprised to find that quite an amount of detail will show if the exposure is not very short. This second method is preferable because of less likelihood of halation or reflected light in the lens.

A strong developer with bromide added should be used to obtain a thick heavy ground with clear glass for the silhouette.

The curve at the bottom can be provided either by the use of opaque or by a cut-out of black paper fastened over the plate on the film side. In the case of a gentleman, it adds to the effect to use opaque in blocking out the collar.

The print should be made on a hard-working paper such as Regular Velox, Contrast Cyko, or Hard X. Azo.

Stained and Chapped Hands

VERY few stains, including even strong dyes, refuse to be removed while fresh with a solution of three parts of methylated spirits and one of hydrochloric acid, rubbed on with a tuft of absorbent cotton, writes A. E. Bawtree, F. R. P. S., in *The Amateur Photographer*. Chapped hands, caused chiefly by frequent immersion in cold water, are best prevented by a home-made preparation, states Mr. Bawtree. In an eight-ounce bottle place two ounces each of lemon juice, olive oil and glycerine and shake thoroughly to mix. About fifteen minims should be rubbed well into the hands, not for-

THIRD PRIZE
STILL-LIFE



SUNDAY

JOHN W. GILLIES

getting the wrists, and well in between the fingers, after the day's work and again at bedtime.

"Distressing cracks in the finger-tips are usually constitutional, and call for special care and treatment. As a preventive, place a little vaseline in the palm of the hand, and thoroughly work the finger-tips of the other hand into this, finally wiping off all removable excess. This should be done before commencing work each day. For the best cure for the trouble when such cracks have opened up I am indebted to a surgeon, who finds that the false skin described is sufficiently strong to withstand the severe washing necessary in order to sterilize the hands for performing an operation. Any druggist will make up the preparation. In a $\frac{1}{2}$ -ounce bottle

place enough celloidin shavings to about one-third fill it, and fill up with two parts of ether to one of alcohol. Shake occasionally, and in a few days you will have a viscous or almost gelatinous solution. A matchstick should be stuck into the inside of the cork, reaching nearly to the bottom of the bottle. The well-washed and thoroughly dried finger-tip, upon which there is a fissure, should be covered with this preparation, the crack itself being filled in with two or three coats, which take less than one minute to set. Before replacing the cork after use, smear a little of the preparation round the neck of the bottle inside with the stick in order to form a seal and prevent evaporation of the very volatile contents."



DUCKS JOHN W. SCHULER
HONORABLE MENTION — STILL-LIFE

Keeping Aristo Paper Fresh

"If Aristo-Platino paper be kept in a hot, dry room for a week or two it becomes dried out and all the brilliancy leaves the paper for the time being. I have found by experiments," states A. R. P. in *The British Journal of Photography*, "that if this same paper be kept where it has a chance to gather sufficient moisture, all evidence of weakness will disappear. Thus, paper dried out by artificial heat can always be reclaimed simply by dampening."

"To reclaim dried-out paper and keep it fresh the following idea will be found useful. An air-tight box of any size or shape that is convenient must be made, having a hinged lid, made as air-tight as possible. A few inches from the top of the box a strip of wood must be fixed at each end upon which is set a long, narrow tray, about four inches deep. This tray should not be made too wide in order that it may not interfere with getting at the stock of paper, which should be stored underneath the tray. The tray itself must be about half-filled with water and have several pieces of sponge in it to take up the moisture and distribute it through the lower part of the box, and keep the paper therein in good printing-condition. It is advisable to varnish the negatives with which such dampened paper is used; otherwise there is great risk of silver-stains on them."

Removing Developing-Stains

ORIGINALLY suggested as a fixing-agent for silver chloride, thiocarbamide has found its chief use as a remover of pyro and other developer-stains, also green fog and silver-stains. The following solution is recommended:

Water	10 ounces
Thiocarbamide	100 grains
Citric acid	50 grains

Green Tones on Bromide Prints

THE simplest method of toning with vanadium chloride is effected with the following solution:

Vanadium chloride	10 grains
Ferric chloride	5 grains
Ferric oxalate	5 grains
Potassium ferricyanide	10 grains
Oxalic acid (sat. sol.)	1¼ ounces
Water to	10 ounces

Dissolve the vanadium in hot hydrochloric acid and a little water. Add the ferric chloride and oxalate to the oxalic acid solution diluted with half the water, then add the ferricyanide dissolved in water, stirring well, and finally the vanadium. Tone until the prints turn blue, and then wash until they are green.

Should yellowish stains appear they can be removed by immediately immersing the prints for a while in a solution of ammonium sulphocyanide, two grains per ounce of water.



STUDY J. H. FIELD
HONORABLE MENTION — STILL-LIFE

THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and all regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston.

What to Take and When to Take It

WHEN one's camera is a new friend it sometimes proves a disappointing one because one does not realize its limitations and expects the impossible. One has yet to learn that not everything that looks attractive to the eye is capable of making a pleasing picture in miniature.

The element of color is often a large part of the beauty of Nature as we see it and, shorn of this, the view is most commonplace and uninteresting. To make a picture worth the taking there must be some sort of composition, either in line or mass, some *one* thing that takes precedence of everything else in the view and will hold the eye.

A great mistake of the novice is to try to include too much in his views. Here is a winding brook beside the road. The road itself is attractive, too, and a group of cattle feeding in the meadow seem very picturesque; but do not be too greedy and try to get far enough away to include them all in one exposure. The result will be a jumble in which the eye will rove from the road to the brook, from the brook to the cattle and find no one of them sufficiently large or interesting to hold it or give it satisfaction. It is far better to make three pictures. Then the curving road with its tree-shadows will invite one and lead quietly into the background. The brook will hold undisputed sway in another and the clear rippling water in the foreground will add a great charm otherwise lost, whereas the cattle on the nearer approach take their place as the center of interest in the third.

And when we say "center of interest," we do *not* mean the center of the picture-space, for that is the very worst place for the principal object. A position about one-third of the way from one edge of the print is a good general rule to follow in placing your interest.

In a horizontal composition, like a sea-view, the horizon should be placed high, leaving less than one-third for the sky, or, if a sky full of cumulus clouds be the chief interest, then place the horizon very low; in any case it should be far enough from the center to leave no possible question as to which part of the picture contains the greater interest.

In a vertical picture, the same rule as to space-division holds good. If a fine old tree be given your interest, then get near enough to have the tree fill about two-thirds of the space and take it from some viewpoint where the other third will contain nothing to detract from this main object. If, on the other hand, it is the distant view that attracts you and the tree is simply to give perspective and send the hills back into their proper relative places, then give it only about one-third, or less, and it will take its place as merely incidental.

Another important thing is to make one's picture at the proper time; that is to say, when the light is such as to give the best possible effect for the subject to be

made. One often hears the slogan, "Always have the sun behind you." That is a safe enough motto for one who seeks only "records," but for the ambitious amateur who is looking for pictorial effects it is all wrong. Far more often the long shadows, falling toward you as you look almost directly toward the sun, will give the element of poetry and charm that you seek and that you look for in vain if you look only with the sun over your shoulder.

Looking squarely with the sun, in fact, is about the worst possible light, as then the shadows are out of sight behind the objects which cast them and the roundness and relief that shadows give are most important requisites for a pleasing photograph. Good modeling is obtained by working about at right angles with the sun's rays, but working toward the light is very likely to give the sort of picture you go back to again and again and are proud to show to your friends.

The time of day affects the length of the shadows as well as their direction, and it is wise to lay the camera aside through the middle of the day and work only during the early morning hours or toward the last of the afternoon. Then the shadows are long and the atmosphere at its best.

If you *must* try for portraits—and of course one's admiring friends and relatives all expect their pictures to be taken—do not make the universal mistake of placing them in strong sunlight and taking a snapshot. Such methods are prone to result in squinted eyes or only black caves where eyes should be.

If you wish to retain friendly relations with your sitters, always choose the shady side of the house and place your camera on some support, such as a low step-ladder for standing poses or a table for seated figures, and move the indicator on the shutter to *B*. At this point the shutter will remain open as long as you press the bulb. When all is in readiness, give the bulb a firm pressure and release at once. In arranging portraits, remember that the background is a very important item. The side of the house may be the most easily available but it will seldom prove the most satisfactory. Many an otherwise perfectly good portrait has been spoiled by the ugly horizontal lines of the clapboards forming the background. Foliage is better, if not too strongly lighted, or better yet, hang some plain smooth cloth as a background for the head, if it is to be a real portrait.

For the beginner, however, it is better to avoid attempting portraiture. Start in with a distant figure or group as part of your landscape, but do not make the mistake of dividing the interest evenly between your landscape and your figures. Either the one or the other must be unquestionably preëminent.

THE first sign of decadence in art is deplorable facility in work. — *Alfred de Musset*.

THE ROUND ROBIN GUILD MONTHLY COMPETITION

For Beginners Only

Closing the last day of every month. Address all prints to PHOTO-ERA, Round Robin Guild Competition, 383 Boylston Street, Boston, U. S. A.

Restrictions

ALL Guild members are eligible in these competitions provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Anyone who has received only Honorable Mention in the PHOTO-ERA Monthly Competition for advanced workers still remains eligible in the Round Robin Guild Monthly Competition for beginners; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

Prizes

First Prize: Value \$5.00; *Second Prize:* Value \$2.50; *Third Prize:* Value \$1.50; *Honorable Mention:* Those whose work is worthy will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "General;" but only original prints are desired.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer advertising in PHOTO-ERA.

Rules

1. These competitions are free and open to all members of the Round Robin Guild. Membership is free to all subscribers and regular purchasers of PHOTO-ERA sending name and address for registration.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. **Be sure to state on the back of every print exactly for what contest it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-vener. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

Awards — Beginners' Contest

Closed Feb. 28, 1914

First Prize: J. Satterlee.

Second Prize: Earl A. Newhall.

Third Prize: James Allan.

Honorable Mention: Frank Appleby, Wm. Haedrich, Jr.

Special commendation is due the following workers for meritorious prints: P. D. Booth, Winn W. Davidson, Paul W. Elder, Mary E. B. Grunendike, Alfred S. Harkness, Emil G. Joseph, Mrs. Wilma B. McDewitt, Mildred I. Miller, Gordon Park, H. B. Smith, Ellwood H. Snider, S. Tsura, Karl E. Volk, S. A. Weakley.



ONE may not judge of the greatness of a work by its dimensions. — *Alfred Stevens.*



AN OLD LANDMARK

EARL A. NEWHALL

SECOND PRIZE — BEGINNERS' CONTEST



CLOSE OF DAY

J. SATTERLEE

Rapid Plates and Grain

"THE more rapid the plate the more likely is grain to show itself," writes Eric Williams in *The British Journal of Photography*. "It is but fair, however, to say that plates have improved very much of late, and grain is not so common as it was a year or two back. In some cases the plates are perhaps to blame, but in the majority of cases it is the photographer himself, as it is in his power to increase or diminish the coarseness of the grain. A bad worker may, I think, get coarse-grained negatives upon slow plates, while a good worker can get a passably fine grain upon a plate with the most pronounced grainy propensities.

"Recent experiments have satisfied me that increased or pronounced grain in negatives is due either to forced development or improper drying, or maybe both. The method of drying, however, influences grain more than underexposure or forced development. Proper development of a more or less correctly-exposed plate will give a normal negative, but should the image hang back and the operator add more alkali with the hope of dragging out more of the underexposed details, the greater the danger of the grain becoming more coarse.

"In other words, the greater the excess of alkali, particularly soda, over the normal amount, the coarser is the grain likely to be, in the majority of cases at any rate.

Some makes of plates, however, will stand more soda than others.

"It is to the method of drying negatives that one may look upon as being the cause of most examples of coarse grain, as the temperature has far more effect upon the gelatine film and its constituents than the average worker is likely to imagine. In brief, the warmer and more sultry the atmosphere in which the fixed and washed negative is put to dry the coarser will be the grain. The finest grain is obtained when the negative is dried in a cool draught. Those workers who have a microscope of high or even moderate power may test the truth of this assertion very easily. Simply fog an underexposed plate and develop, fix and wash in the usual manner. Place to dry in a rack with several others, or one near the gelatine side of it, and in such a way that the edges dry as quickly as possible (in a cold atmosphere or cool draught). When an undried patch remains in the center of the negative, take the plate and dry the laggard patch in a very warm place, but not so warm as to melt it.

"If this system is not convenient, others may be found without difficulty for getting two different kinds of drying on one negative. When dry, pass the negative under the microscope, when a distinct difference between the two systems of drying will be seen — that dried in the cool air showing the finer grain."

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.

S. C. L. — **To waterproof woodwork** in the dark-room, there are several preparations on the market. If you prefer to make one, use:

Asphalt	4 ounces
Pure rubber	30 grains
Mineral naphtha	10 ounces

Apply three coats with a stiff brush, allowing each to dry thoroughly before applying the next. As the vapor from this solution is very inflammable, proper precautions must be taken.

D. A. P. — If you can avoid the use of formalin, do so; it hinders the quick passage of fluids into and out of the gelatine emulsion. Make sure that the temperature of developer, fixing-bath and wash-water does not vary beyond 65 to 70 degrees, and you will have no cause to use formalin before development to prevent blisters on bromide prints.

To blacken aluminum portions, first clean with fine emery powder, wash well and immerse in:

Ferrous sulphate	1/4 ounce
White arsenic	1/4 ounce
Hydrochloric acid	3 ounces
Dissolve and add	
Water	3 ounces

H. W. H. — If you had told us the make of camera you use for **copying**, it would be easier for us to advise you. There seems to be no reason why you should not obtain a sharp image provided you have sufficient illumination to focus by. In this work, of course, it is advisable to stop down to F/32 or smaller, since the time of exposure is not an important matter—it may easily be as long as full timing requires.

A supplementary copying-lens might be of service to you. This can be bought for a small sum—probably \$1.50—to fit over your present lens. It enables you to copy exact size.

S. A. E. — **Crimson tones on gaslight or bromide prints** may be had by first sulphide toning them and then gold toning them. The latter bath should consist of ammonium sulphocyanide 10 grains to the ounce of water. To this add 1 grain of gold chloride dissolved in a little water.

C. E. W. — Frankly, there is no best developer. All work out to nearly the same result when properly used. Still, each has certain natural tendencies which may be made the most of when necessary. Several of the largest firms use **Edinol-hydroquinone exclusively for motion-pictures**. The standard formula which follows may be multiplied to any desirable quantity:

Water	5 ounces
Acetone sulphite	75 grains
Sodium sulphite, anhydrous	225 grains
Edinol	30 grains
Hydroquinone	15 grains
Potassium carbonate, anhydrous	1 ounce

For use, dilute four to six times. For the contrasty subject you mention, it will be advisable to omit the hydroquinone and use 45 grains of Edinol, adding potassium bromide as desired.

Edinol or Edinol-hydro are splendid in the tank, but **Glycin is the standard tank-developer**. The following is the best formula we know:

Dissolve in the order stated:	
Hot water, about 200 degrees	50 ounces
Sodium carbonate, anhydrous	2 ounces
Glycin	1/2 ounce
Sodium sulphite, anhydrous	1/2 ounce

For 25-minute work, take 2 ounces of stock-solution to 30 ounces of water. Temperature 65 degrees.

Rytol is an excellent tabloid developer—a universal developer which, with proper modification, may be used for all purposes. It is in compact form for traveling, and then, too, no weighing is required. Amidol does not keep well in solution, necessitating the weighing of the salt each time a developer is wanted for use. For the purposes you have mentioned, the other developers are preferable.



ICE-CAPPED FILES

JAMES ALLAN

THIRD PRIZE — BEGINNERS' CONTEST

Print-Criticism

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.

F. S. S. — In the portrait of a little girl there are several serious faults, one being the distracting white sleeve, although pleasing in itself. The white mass in the foreground — her lap — attracts more attention, almost, than the face itself. Here the chin might have been dropped a fraction of an inch. It would thus have been shortened, concealing the nostrils now objectionable. The same effect might have been obtained by raising the camera, although the former method is easier.

S. F. L. — Your portrait of a young woman, made with the soft-focus lens, is very attractive, but the large white hat dominates the face, making the latter secondary in importance. However, the more serious defect is the arms which, extended from the body, have been trimmed off and appear to have been amputated. This is an unpardonable offense. Rather show the entire picture with the hands of the sitter clasped gracefully behind the head.

E. F. D. — Your three prints really represent splendid camera-material, only the view-point has been chosen unwisely. Number 1 may have a local historical interest; but from the view-point you have chosen it does not constitute an artistic picture. The material is excessive for your picture-area, and the principal mass might look better had it been photographed at a greater distance. As a mere record of a curious bridge or an historical landmark it appears to serve its purpose; but pictorially it is not a success. Number 2, the waterfall, has an attractive setting, but the time of day does not appear to have been well chosen; the lighting is weak, although the scene presents several decided pictorial possibilities. Why not observe the scene on a bright, sunny day, viewed from various angles and from different elevations? You will doubtless discover that eventually the material will yield an attractive picture. Number 3, the group of trees, on the further shore of what appears to be a pond, is dark, gloomy and unattractive. Viewed on a bright, sunny day from a different point of vantage, this same locality would doubtless produce a better-balanced composition. Remember the point of view.

A. A. W. — My first criticism would be that your prints are flat, lifeless and monotonous. This is due partly to the printing-medium, which should be of a kind to give more contrast from these particular negatives. Your dealer will supply you with the necessary paper. Picture Number 1 includes too much, and does not appear to be important pictorially. There is no center of interest. It also suffers from a multiplicity of objects. The large, bare field in the foreground seems superfluous, and takes the interest away from more interesting objects. Number 2 shows by the processes of elimination or trimming how a real picture may be produced from a large, confused mass. Here the picture has some life and snap, but the spacious sky is blank and monotonous. It would be incongruous to introduce clouds at a time when none appears in the sky, and the picture-maker is entitled to some license by shading it

during the developing or the printing; or he may trim off a section of the monotonous surface, three-eighths of an inch from the top. Why not try this same subject on a bright, sunny day and select the right time, either early morning or late afternoon? It is amazing how many totally different pictorial effects the same subject will yield when viewed under different conditions of light and atmosphere.

I think that if you study Poore's "Pictorial Composition and the Critical Judgment of Pictures," and also Anderson's "A B C of Artistic Photography," you



FLORENCE

FRANK APPLEBY

HONORABLE MENTION — BEGINNERS' CONTEST

will find them interesting and helpful in your efforts to produce real pictures. Both of these books will be sent postpaid upon receipt of price. The latter was reviewed in December PHOTO-ERA, 1913.

L. A. G. — In this village road the house at the extreme right is glaring and forms a disturbing element in the picture. The center of interest is really the winding and disappearing country-road, and the white house at the right and the tree-trunk close by are a detriment rather than addition to the pictorial result.

Exposure-Guide for May

Calculated to give Full Shadow-detail, at Sea-level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of time in table. From 8000 to 12000 feet use $\frac{1}{2}$ of exposure in table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class I plates, stop F/8 or U. S. 4. For other plates, or stops, see tables.

Hour	Bright Sun	Sun Shining Through Light Clouds	Diffused Light	Dull	Very Dull
10 A.M. to 2 P.M.	1/60	1/30	1/15	1/8	1/4
9-10 A.M. and 2-3 P.M.	1/50	1/25	1/12	1/5	1/3
8-9 A.M. and 3-4 P.M.	1/30	1/15	1/8	1/4	1/2
7-8 A.M. and 4-5 P.M.	1/20	1/10	1/5	1/3	2/3
6-7 A.M. and 5-7 P.M.	1/15	1/8	1/4	1/2	3/4
5-6 A.M. and 6-7 P.M.	1/10*	1/5*	1/3*	2/3*	1 1/2*

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions under which one works. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop.

* These figures must be increased up to five times if light is inclined to be yellow or red. Latitude 60° N. $\times 1\frac{1}{4}$; 55° $\times 1$; 52° $\times 1$; 30° $\times \frac{1}{2}$.

For other stops multiply by the number in third column

F/4	U. S. 1	$\times 1/4$
F/5.6	U. S. 2	$\times 1/2$
F/6.3	U. S. 2.4	$\times 5/8$
F/7	U. S. 3	$\times 3/4$
F/11	U. S. 8	$\times 2$
F/16	U. S. 16	$\times 4$
F/22	U. S. 32	$\times 8$
F/32	U. S. 64	$\times 16$

SUBJECTS. For other subjects, multiply the exposure for average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, glades and under the trees. **Wood-interiors** not open to sky. **Average indoor-portraits** in well-lighted room, light surroundings.

Example :

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used. To photograph an *open landscape, without figures*, in May, 2 to 3 P.M., bright sunshine, with plate from Class I, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/40 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of "Table for Other Stops," opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply $1/40 \times 4 = 1/10$. Hence, exposure will be 1/10 second.

For other plates consult Table of Plate-Speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. $1/40 \times 1/2 = 1/80$. Hence, exposure will be 1/80 second.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

<i>Society or Title and Place</i>	<i>Date</i>	<i>Particulars of</i>
KODAK EXHIBITIONS Detroit, Armory. Cleveland, Central Armory. Buffalo, Elmwood Music Hall.	April 27 to May 2 May 4 to 9 May 11 to 16 May 1 to 15	Eastman Kodak Company, Rochester, N. Y.
BOSTON ART CLUB Collection of Gum-Prints by J. H. Garo.	April 27 to May 2 1914	Secretary, Boston Art Club, Boston, Mass.
TORONTO CAMERA CLUB SALON	April 27 to May 9	A. G. Fraser, Secy.-Treas., Toronto Camera Club, Toronto, Canada.
FRESNO CAMERA CLUB PHOTO-ERA Prize-Pictures.	May 18 to 30	Robert A. Parker, Chairman, 1119 Franklin Ave., Fresno, Cal.
LOS ANGELES CAMERA CLUB PHOTO-ERA Prize-Pictures.	June 2 to 13	T. K. Adlard, Secretary, 321 S. Hill St., Los Angeles, Cal.
WINNIPEG CAMERA CLUB Annual Exhibition.		J. M. Iredale, Secretary, Industrial Bldg., Winnipeg, Canada.

Plate-Speeds for Exposure-Guide

Class-numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa. Ilford Monarch Lumière Sigma Marion Record Wellington Extreme	Kodoid Lumière Film and Blue Label Marion P. S. Premo Film Pack Seed Gilt Edge 27 Standard Imperial Portrait Standard Polychrome Stanley Regular Vulcan Film Wellington Anti-Screen Wellington Film Wellington Speedy Wellington Iso Speedy	Lumière Ortho A Lumière Ortho B Class 2, P. E. 78, Wy. 120, Wa. Cramer Medium Iso Ilford Rapid Chromatic Ilford Special Rapid Imperial Special Rapid Lumière Panchro C
Class 1/2, P. E. 128, Wy. 250, Wa. Barnet Super-Speed Ortho Cramer Crown Eastman Speed-Film Hammer Special Ex. Fast Imperial Flashlight Seed Gilt Edge 30 Wellington 'Xtra Speedy	Class 1 1/4, P. E. 90, Wy. 180, Wa. Central Comet Cramer Banner X Cramer Instantaneous Iso Cramer Isonon Cramer Spectrum Defender Ortho Defender Ortho, N.-H. Eastman Extra Rapid Hammer Extra Fast Ortho Hammer Non-Halation Hammer Non-Halation Ortho Seed 26x Seed C. Ortho Seed L. Ortho Seed Non-Halation Seed Non-Halation Ortho Standard Extra Standard Orthonon	Class 3, P. E. 64, Wy. 90, Wa. Barnet Medium Barnet Ortho Medium Hammer Fast Seed 23 Wellington Landscape Stanley Commercial Ilford Chromatic Ilford Empress Cramer Trichromatic
Class 3/4, P. E. 120, Wy. 200, Wa. Anso Film, N. C. and Vidil Barnet Red Seal Central Special Defender Vulcan Ensign Film Hammer Extra Fast, B. L. Ilford Zenith Imperial Special Sensitive Paget Extra Special Rapid Paget Ortho Extra Special Rapid Seed Color-Value	Class 1, P. E. 111, Wy. 180, Wa. American Barnet Extra Rapid Barnet Ortho Extra Rapid Imperial Non-Filter Imperial Orthochrome Special Sensitive Kodak N. C. Film	Class 5, P. E. 56, Wy. 60, Wa. Cramer Commercial Hammer Slow Hammer Slow Ortho Wellington Ortho Process
	Class 8, P. E. 39, Wy. 30, Wa. Cramer Slow Iso Cramer Slow Iso Non-Halation Ilford Ordinary Cramer Contrast Ilford Half-tone Seed Process	Class 100, P. E. 11, Wy. 3, Wa. Lumière Autochrome

OUR ILLUSTRATIONS

Edited by WILFRED A. FRENCH

THE cover-page this month bears a view typical of Yosemite Valley, repeated on page 216, and is connected with the initial article by George R. King.

A more expressive or more harmoniously composed portrait, than that which constitutes the frontispiece of this issue, has never appeared in PHOTO-ERA. In the opinion of many capable critics this picture—by an artist of the Middle West—was the gem of the Grand Portrait-Class, the official print-competition at last year's convention of the Photographers' Association of New England. The arrangement of the figure, management of the light, and interpretation of character and depth of expression merit high praise. In performance, simplicity and repose are the dominating qualities; fitness speaks in every line, in every accent. It is a portrait worthy to be studied and admired.

The subjects which accompany George R. King's story of California are partly illustrative, partly pictorial. Of the latter, the larger plates show the artist at his best, particularly the cloisters, page 214. Here we have a satisfying study of light and shade, a well-balanced chord in architecture, because of the judicious choice by the artist of the time and kind of day. Mr. King is a camerist of great experience, at home in every branch of his chosen profession, an extensive traveler and an ardent lover of nature. A profound sense of beauty and sterling craftsmanship characterize his pictorial records of California.

A strong bond of friendship has sprung up between William Norrie, the Scottish marine artist, and PHOTO-ERA readers, so that the pleasure is mutual with the appearance of a Fraserburgh sea-piece. The present contribution, page 222, is a delicious view of the North Sea, off the Scottish coast, a locality which has yielded our friend a wealth of delightful seascapes. Data: Goerz half-plate camera and 8-inch Dagor lens; August, 8:30 A.M., $\frac{1}{25}$ second; Imperial Sovereign; pyro-ammonia; Ilford P. O. P., matt-surfaced on glass.

One of the sensations at the Kansas City Convention last July, was E. E. Doty's portrait of a young woman, in the Hammer Dry-Plate Company's print-exhibit, page 223. The facial beauty of the subject and the unusual method of illumination (by an ordinary mirror) combined to make this picture the most important object of interest in the Hammer show. Everybody coveted the print; but Manager Salzgeber would listen to no offer; even the Editor was denied a hearing. The picture was subsequently seen at various state exhibitions, admired and coveted till, at last—Persistence, thy name is ——— the Hammer people capitulated, and the print arrived at the offices of PHOTO-ERA not long ago. Data: 11 x 14 studio-camera; Suter lens; 28-inch focus; used at F/8; February, north light, with mirror; 5 seconds; Hammer Red Label; pyro; carbon-print by single transfer on silver-coated paper.

The little domestic scene, by John Gordon, Jr., page 224, will provoke many a smile. It is so well done, that pictures of babyhood with a miniature camera—as demonstrated in this issue—should be frequent occurrences in every family—of opportunity. Data: camera in one hand, Caywood flash-lamp in the other; Ica Atom; 1c Tessar; $2\frac{1}{2}$ -inch focus; stop, F/9; one mustard-spoon of Victor powder; Seed Ortho L; Dura-tol-Hydro, in tray; size of original negative, $1\frac{3}{4}$ x 2 $\frac{3}{4}$ inches.

The series of vacation-pictures which illustrate Wm. E. Clogston's story are interesting, both as records and pictures, although they are naturally modest in their artistic pretensions. Data given in Mr. Clogston's narrative.

Patience, judgment and skill eminently characterize the achievement by Howard S. Adams, page 233. Incidentally the two representatives of the animal-kingdom are exceedingly well placed in the picture-area. Only the hunter can testify as to the importance of the episode pictured by Mr. Adams, to whose uncommon skill and experience as an animal-photographer the Editor has on several occasions paid high tribute. Mr. Adams informed us that the value of the dog in this picture—the well-known pointer, "King of Reading's Kent"—is clearly shown by his steadiness in holding the point after the bird had "flushed." The bird is a quail and said to be the most difficult to photograph when in flight. Data: April, about 4 P.M.; clear day; $3\frac{1}{4}$ x $4\frac{1}{4}$ L. F. Graflex; 7-inch Euryplan, F/4.5; used wide open; focal-plane shutter; $\frac{1}{500}$ second; Wellington Press plate; tank; celeritas; 3 x $5\frac{1}{2}$ enlargement on glossy Argo.

With E. H. Weston and George S. Seymour, Wm. Ludlum, Jr., forms a brilliant trio of post-photographers, whose dual achievements have delighted the readers of PHOTO-ERA. The "Road to Yesterday," page 235, is very suggestive, and its sentiment made clear by the camerist's admirable poem. Data: 3A Kodak; R. R. lens; stop, U. S. 4; $\frac{1}{25}$ second; dull light; N. C. film; eiko-hydro; on Cyko Prof. Buff.

The Photo-Era Monthly Competition

DESPITE the manifold suggestions and warnings of Miss Bingham, the efforts of many to interpret the theme, "Still-Life," were destined to be failures, because of the tendency to utilize too many objects in the composition. The significance of the simple melody, the simple line, is not easily grasped; its meaning is elusive. It is an interesting lesson for the teacher to demonstrate, by the process of elimination, the value of repose, dignity, beauty. This effectively illustrates the difference between an elaborate gown and a simple one; or between an intricate, confusing melody and one of a quiet, exalting character. As was to be foreseen, there were arrangements of heterogeneous objects—a pipe, some fruit and a number of books composing one subject, and a copy of the Bible, a magazine and a vase filled with flowers relieved against the American flag serving as a background constituting another. The management of light, too, offered serious obstacles. The theme was a really difficult one, particularly to those who had failed to read the usual preparatory paper by Miss Bingham; still it is to be hoped that the unsuccessful participants will continue to experiment in this instructive branch of pictorial photography and eventually evolve an harmonious, satisfying composition.

Fannie T. Cassidy grasped the spirit of the theme with commendable daring, for bunches of grapes placed in a basket of elaborate pattern are not likely to produce a soothing, pictorial effect, unless managed with artistic skill. Yet, one serving as a foil to the other, these two masses yielded to the cleverness of the artist, and the result, on page 238, justifies the effort expended.

The interpretation of the subject, "Still-life," by Wm. Ludlum, Jr., page 240, gives a greater degree of latitude to the imagination than Fannie T. Cassidy's technically perfect achievement. It is well balanced as to line and light. Data: $8\frac{1}{2} \times 8\frac{1}{2}$ Verito lens; stop F/8; 5 seconds; $6\frac{1}{2} \times 8\frac{1}{2}$ Polychrome plate; pyro; direct print on Cyko S. M. Prof. developed with Duratol.

A still broader and unconventional treatment of the theme, and where the imagination can have free play — no pun intended — is furnished by John W. Gillies, page 241. The spacing is worthy of note, as is also the simple, personal equipment of a rancher. Data: December, 1913; 3 r.m.; dull day; 4 x 5 Graphic; $6\frac{1}{2}$ -inch Euryplan, series Va; at F/8; Wellington Anti-Screen plate; M. Q.; Wellington Bromide enlargement; rough concrete wall in cellar as background. The equipment was used by Mr. Gillies when "roughing it" in New Mexico and the Southwest not many years ago.

The picture of game, page 242, illustrates an old idea; but if done well by the camerist, there is no need of apology. The present arrangement is good, but the values and the lighting are open to criticism. The use of a color-sensitive plate is almost imperative in work of this kind, and by trying different methods of illumination an effect superior to the rest will easily be found. Data: Poco 5 x 7; R. R. lens; by light of north window; 1 second exposure; stop F/16; Stanley plate; Pyro; Cyko platinum print.

The design by J. H. Field, page 242, should be studied carefully by aspiring pictorialists. It is merely a tentative arrangement, a study in values and in light and shade, and is not a serious attempt to illustrate the subject of still-life. The beauty of craftsmanship is also worthy of note. Data: February 21; strong light, Voigtlander & Sohn's Heliar; full opening; $\frac{1}{2}$ second; Seed Gilt Edge 30; pyro-soda; Artura print, toned.

The Beginners' Competition

THE increased artistic quality of the entries in the Beginners' Department is extremely gratifying to all concerned. Of course, when the work of a successful entrant reveals a high standard of excellence, and such work represents his average level of achievement, he is at liberty to try his fortune in the advanced class, and if only partly successful, he will hardly wish to reënter the lists of the lower class. However, the aim of the Beginners' Competition is to improve the artistic and technical standard of the participants, and the sooner they attain success and are graduated, the better the Editor will be pleased and the more quickly the cause of pictorial photography will be advanced.

The picture of what appears to be an old mill, page 244, is very attractive by reason of its excellent viewpoint and the judicious rendering of values, notably of the rippling waters.

The author of the leading picture in this class, page 245, is no mere tyro. Mr. Satterlee has been an active camerist and serious student for several years, and, although having won Honorable Mention in the Advanced Class several times, he may, according to the published rules, enter prints in the Beginners' Class. The sterling artistic qualities of "Close of Day" are, therefore, somewhat accounted for. One admires the pronounced pictorial beauty of the composition, its graceful lines, natural perspective and soft atmospheric effect. Data: Jan. 5, 1914; 11 A.M.; sunlight; 8-times color-screen; 4 x 5 Barnet Super Speed Ortho; $6\frac{1}{2}$ -inch R. R. lens; F/8; $\frac{1}{25}$ second; Duratol, tank; direct Instanto print.

In "Ice-capped Piles," page 246, James Allan has shown an observing, discriminating faculty. The man-

ner in which the interest of this unusual scene has been managed, the perspective and the technique with its values and gradations, merit high praise. Data: Jan. 13, 1914; 1 P.M.; bright; Reflex camera; 7-inch Goerz Celor; stop, U. S. 2.9; $\frac{1}{25}$ second; 3-times color-screen; Standard Orthanon; Pyro; Cyko Platinum.

The open-air portrait by Frank Appleby, page 247, has much to commend it. The pose is easy and natural, the face is lighted admirably and the background managed with discretion. Nevertheless, the costume with its *glaringly white* feather, collar, cuffs and gloves, presents violent contrasts, although it is possible to subdue the objectionable highlights either by working on the negative or controlling the printing. The rail is a convenient but not an artistic accessory. Judicious trimming at the top and bottom might also have improved the appearance of the picture. Data: September, 3 r.m.; sunlight; $3\frac{1}{4} \times 5\frac{1}{2}$ Kodak; Goerz lens; stop, F/6.3; N. C. film; $\frac{1}{50}$ second; M. Q. in tray; direct Azo print.

The Bissell Colleges

MR. F. M. CORK, of Shanghai, China, has just finished a thorough course in photography, photo-engraving and three-color work and has gone to New York City. He will leave for China in the near future, where he intends to engage in the photo-engraving business.

Mr. Albert Haueter, engraving student of 1912, is employed by the government as map-reproducer in the civil engineering-work of the war-department.

Mr. Clarence Weed, of the Eastman Kodak Co., gave one of his helpful talks and demonstrations at the college last month. He is a great favorite.

The college recently placed an order for forty-five high-grade air-brushes, with fittings aggregating a total of \$1,100. The air-brush work at the college is under the direction of Professor Dishinger, and the tuition-fee for the course is \$100.

A class of fourteen members was graduated in March. Three graduates were from abroad — Dr. Guido Lorenzoni, of Tyrol, Austria; Mr. Anthony Cambanes and Mr. N. Harutunian, of Turkey.

President Bissell spent three days at the Convention of the Photographic Dealers' Association of America at Chicago in March.

The colleges are enjoying the largest attendance since they were founded and are establishing two new departments — air-brush art-work and motion-picture work, both taking and projection.

The New York Camera Club Gives an Autochrome Feast

OF the monthly entertainments given by the Camera Club of New York this season, the exhibition of Mr. Franklin Price Knott of his large and beautiful collection of Autochromes, on the evening of March 13, will be remembered with special satisfaction by those fortunate enough to be present. Before a large and distinguished audience Mr. Knott projected on the screen over two hundred 5 x 7 Autochromes — all of his own making. The subjects were wonderfully varied in character and color-effect, and illustrated many phases of travel in America and Europe. There were scenes and types of several Indian tribes, the Hopi in particular; The Yellowstone; the Grand Canyon of Arizona; The Yosemite; Niagara Falls and other natural wonders. Of Europe, too, Mr. Knott showed a large number of exquisite plates, including several sunsets. The full range of his color-gradation, the clearness, delicacy and fidelity, were the subject of genuine admiration, the audience being composed largely of connoisseurs.

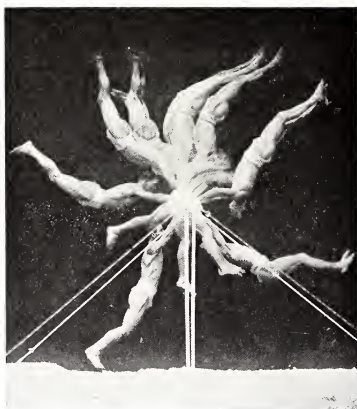
ON THE GROUND-GLASS

Edited by WILFRED A. FRENCH

How Was this Picture Made?

THE accompanying picture is the result of a remarkable photographic discovery that splits up motion on a single plate and shows the same individual in every movement of the "giant swing," from the very first movement to its completion. The camera used for this purpose is the invention of M. Marey, of Paris, who, for the present at least, declines to explain its *modus operandi*.

Heretofore, one of the greatest difficulties in the proper instruction of physical culture has been to explain to the pupil the correct method of executing movements. It is now possible, with the Marey camera,



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THE COMPLETE "GIANT SWING" ON ONE PLATE

to photograph a pupil in the performance of the class-exercise all on one plate, and then by showing it on a screen or print, point out to the pupil any faults in the executions and just what particular position or action to rectify. The photographs are made slowly and on a single plate, so that the movements—instead of being photographed a given number of times in a second and shown in rapid succession on a screen, as they appear to the human eye in the ordinary way—are photographed at such a lower rate of speed that they divide at a given movement every action made.

The Editor has several solutions to this problem; but it may interest PHOTO-ERA readers to solve it in their own way. The old-fashioned method was to photograph motions of this sort separately, each on one plate, cut out the figure and paste it in the desired arrangement upon a separate, original print, then copy.

How wide an application is in store for M. Marey's camera is problematical. It will depend upon the selling-price which, of course, will be regulated by the demand. That a similar and even superior result can be obtained by means of ordinary cinematography is very obvious; but the fact that satisfactory results may be obtained on one plate seems to offer special advantages.

When Money Should Be Returned

"My son," said shrewd and experienced Uncle Joe to a young man who had just opened a small mail-order business, "never return money under any circumstances. If you haven't just what a man wants, send him the next best thing, but be sure it's all right. If a customer overpays, keep back the difference and suggest what he can have for that amount—perhaps more of the same article or something else." This kind of advice reminds one of what is sometimes called clever salesmanship—to sell a customer what he doesn't want. Anyone can sell a customer what he asks for; that's easy!

But the Publisher pleads guilty; he *has* returned money. Once in a while, when by some error, a subscription had been paid for twice, the full amount was at once refunded. During the current year, however, a dozen or more instances of an entirely different character have been recorded. A substantial cheque accompanying an advertising-contract for a photographic accessory which was an obvious fraud, and the statement recommending it a deliberate, bare-faced lie. Another remittance was refunded to an individual, in no way connected with the photographic business, who wanted to dispose of a large lot of lenses. His copy was so sensational and misleading as to arouse suspicion; his explanation of the acquisition of the material was likewise wholly unsatisfactory. Money and advertising-copy were returned to two proprietors of studios, the importance of which was found to be ridiculously exaggerated—traps for the unwary. Requests to print "For Sale" notices were declined in two cases where legal ownership of the new and expensive equipment in question could not be established. Requests, for positions, from strangers who could not furnish the necessary references, were also refused. The criticism of our policy, "You are too—particular," is accepted as a compliment. But fortunately for these advertisers, and unfortunately for many innocent people, the objectionable advertisements were finally published—elsewhere.

A policy which discriminates justly against objectionable advertisements, and one which enjoys the unanimous approval of the friends and supporters of PHOTO-ERA, deserves to be rigidly maintained.

American Amateurs Are Asleep

ENGLAND is the home *par excellence* of amateur photography, and Germany the land where the amateur's interests are safely guarded. Our Berlin correspondent describes in his May letter the systematic and effective methods of the German camera clubs in disposing of desirable photographic prints at a profit. A more businesslike procedure cannot be conceived. It is so simple that our camera clubs should lose not a moment, but organize and emulate their German fellow-amateurs' mercantile thrift.

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Edited by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department
Address all such communications to The Crucible, PHOTO-ERA, 383 Boylston Street, Boston

Universal Developers

III. — Rytol

THIS is a splendid universal developer in tabloid form, obviating the troublesome operation of weighing, and supplying pure chemicals in the most compact possible form. When needed for use, it is necessary only to drop the required number of Rytol tabloids and Rytol Accelerator tabloids into a measure containing the proper quantity of water, press gently and then agitate the water with a stirring-rod. Rytol yields rich tones and good gradation. It does not stain papers or the fingers; nor is it poisonous.

For plates, films, lantern-slides and bromide papers, take 1 Rytol tabloid, 1 Rytol Accelerator and 4 ounces of water. Factor 10 to 15.

For gaslight-papers, reduce the water to 2½ ounces. Warm blacks may be had by using 4 ounces of water and adding 6 one-grain potassium bromide tabloids to each ounce. The exposure is twice normal. Brown-blacks may be had by using 8 ounces of water and adding 4 one-grain potassium bromide tabloids to each ounce. The exposure is four times normal. Sepia tones may be had by using 12 ounces of water and adding 3 one-grain potassium bromide tabloids to each ounce. The exposure is eight times normal.

For 20-minute tank-development at 60 degrees, take 1 Rytol tabloid and 1 Rytol Accelerator tabloid to each 12 ounces of water.

Toning Prints by Sulphuration

"To produce brown tones on photographic images printed on gelatino-bromide, chloride or chloro-bromide of silver papers, mixtures are employed, which, used hot, liberate sulphur in the nascent state and transform the initial black silver constituting the image into a brown product, while leaving the highlights untouched," write A. and L. Lumière and Seyewetz in *The Amateur Photographer*.

"The only well-known toning-method based on this principle — and the only one which has hitherto been used practically — is that comprised of a mixture of hyposulphite of soda and alum, the sulphurizing action of which is only manifested on the silver of the image when heated to about 176° F.

"Such a temperature necessitates not only prior tanning of the gelatine coating, to prevent melting, but also entails many complications and inconveniences in the manipulation of the prints.

"We have succeeded in removing these inconveniences by producing, with cold solutions, sulphuration of the silver by means of nascent sulphur in the colloidal state.

"To produce this colloidal sulphur in the nascent state, we use a mixture of hyposulphite of soda with a colloid — albumen, glue, dextrine, gum arabic, etc. — and add to this mixture an acid dissolved in water —

hydrochloric acid, for instance, which decomposes hyposulphite of soda and liberates sulphur. This sulphur does not precipitate in the solution, but remains suspended in a very finely divided state, provided the proportions of colloid, hyposulphite of soda and acid be suitably chosen.

"We found the following proportions to be the best :

Water	1,000 c.c.	35 ounces
Hyposulphite of soda	125 grams	4¾ ounces
50-percent solution of dextrine	250 c.c.	8¾ ounces

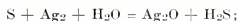
"Immediately before use, 50 c.c. (1¾ ounces) of ordinary hydrochloric acid are added to this solution.

"The mixture, which is at first yellowish and clear, becomes gradually milky, the sulphur which it contains in the emulsion-state not precipitating even after several hours. The bromide or chloride prints immersed in this solution do not at first appear to change color. If, however, after twenty to twenty-five minutes' immersion they are submitted to prolonged washing, the color becomes gradually brown, and after about 1½ hours the final tone is obtained, the whites being unaltered. This tone, which is of a warm brown, is entirely similar to that which is obtained with the use of hyposulphite and alum.

THEORY OF TONING

"HYDROCHLORIC acid decomposes hyposulphite of soda, forming sulphurous acid and sulphur, which remains in the colloidal state.

"Probably this sulphite, very finely divided, is retained by the gelatine of the paper, and reacts on the silver only under the influence of the washing-water. The following equations doubtless represent these reactions :



"It is curious to remark that the color of the image is not appreciably modified, except during washing in water. If during washing the prints stick together in any parts, such parts do not tone, and result in spots. These spots may be removed, even in very old prints, by fresh washing for a sufficient time, when the image becomes uniform in color and all the spots disappear completely.

"We have found that the acids or bisulphates in the formulae which we have indicated may be replaced by alum, but, precipitation of sulphur being then very long, toning is much slower than with acids or bisulphates.

"In order, however, to harden the gelatine coating of the papers, and thus to facilitate treatment during hot weather, a certain quantity of alum may, with advantage, be added to the toning-bath."

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Photographic Dealers' Association Second Annual Convention, Hotel Sherman, Chicago, March 24-27, 1914

THE second annual convention of the Photographic Dealers' Association of America took place March 24 to 27, at the Hotel Sherman, Chicago, and may safely be recorded as the most important event of its kind that has occurred in this country, surpassing in extent, attendance and enthusiasm the first convention, at Rochester, last year.

The exhibits represented the best in the photographic industry of America and Europe. Everywhere there were evidences of marked advance, and, as for the motion-picture industry, the growth since last year was nothing less than wonderful. At Rochester only one motion-picture projection-machine could be seen, whereas this year thirty different types, including eight styles of amateur home-projection models, for both amateurs and professionals, were on exhibition; also a splendid array of motion-picture cameras.

The success of the convention may be noted by the fact that twenty-six American cities were represented by one hundred and forty registered members of the Association. The total number of visiting dealers was nearly three hundred. There were displays by hooth, wall and counter of forty-two photographic manufacturers who represented America, France, Great Britain and Germany.

The chief social function consisted in a magnificent banquet given by Burke & James, of Chicago, to the members of the Dealers' Association and their friends, March 25. This Chicago firm covered itself with glory on this occasion, as every one who was fortunate enough to be present will testify. The photograph on the opposite page is convincing proof of the great ability and high character of the two hundred and twenty-five men who benefited by this demonstration of bountiful hospitality.

Those who are familiar with the photographic trade will recognize, beginning at the right, the faces of Jonathan W. Allison, Allison & Hadaway; W. F. Pinkham, Pinkham & Smith Co.; Floyd M. Whipple, Central Dry-Plate Co.; Geo. L. Barrows, Berlin Aniline Works; H. O. Bodine, Raw-Film Supply Co., Inc.; Chas. H. Kirscher, Carl Ernst & Co.; W. B. Mussen, Anso Co.; Fred Schmid, C. F. Goerz Optical Co.; Harry M. R. Glover and Henry H. Turner, Gundlach-Manhattan Optical Co.; Henry Burke and David James, Burke & James, Inc.; J. H. Andrews, New York Camera Exchange; H. M. Fowler, Fowler & Slater; J. L. Lewis, J. L. Lewis; Max Meyer, Meyer Camera & Instrument Co.; Chas. H. Huesgen, Herherth & Huesgen Co., and other prominent persons.

Among other things of a semi-social character to be pleasantly remembered was a visit to the Selig Polyscope plant, one of the most extensive and best-equipped works for the production of motion-picture plays in the world. The invitation was all the more appreciated because admission is extremely difficult to obtain; but the company made an exception in the case of the dealers, and all who witnessed the preparation of motion-picture plays at the Selig works felt a deep sense of

gratitude. Over one hundred and fifty dealers and manufacturers (and the wives of some of them) availed themselves of this rare opportunity.

Of novelties in new cameras and improved appliances there were many. The first of these was Herherth & Huesgen's new compact Tourist Multiple Camera, which applies standard motion-picture film, obtainable throughout the civilized world, to stationary view-work of every sort. It is a compact box-form instrument of high-grade manufacture, equipped with a Steinheil motion-picture lens working at F/2.5, a steel focal-plane shutter giving hulk and instantaneous exposures ranging from $\frac{1}{40}$ to $\frac{1}{500}$ second, and a direct-vision finder. Suitable mechanical devices are provided to carry and feed the film which is furnished in daylight-loading magazines, each containing a fifty-foot reel for making 750 exposures. One reel will often suffice for a tour abroad. Exposures may be detached for development in a darkroom whenever desired, or allowed to remain until the entire reel has been exposed. A dial shows the number of exposures made, and the mechanism absolutely prevents double exposure. The negatives readily enlarge to 5 x 7, so good is the lens-work. The cost of negative and positive film, including development and printing, is said to be about \$2 a hundred pictures. The camera costs \$175; or, for \$250 a projection-lantern may also be had with which to give a stereopticon entertainment, making use of a positive film printed from the negative. Certainly there can be no more enjoyable or satisfactory way to show friends the record of an entire tour of Europe.

The next important novelty was the Nitrogen Lamp in H. C. White Co.'s exhibit. This lamp supersedes the Mazda lamp, is 100 per cent more efficient and is said to burn 2,000 hours—an epoch in electricity. It is a wonderfully powerful illuminant and of great value in making photographic enlargements.

Another prominent novelty was the Polychrome process, introduced by Allison & Hadaway. This form of color-photography requires only one exposure in one camera to yield beautiful and permanent results.

Of course, the change in the motion-picture industry during the last year has been tremendous, the various improved devices for taking motion-pictures and also for their projection will make a new field for the photographic dealer, inasmuch as this new department of photography directly affects the professional, as well as the amateur, photographer. This is proved by the fact that the illustrated lecture-field now recognizes the necessity of motion-pictures, although the standard stereopticon-view will never be crowded out.

Never were business conditions more earnestly and intelligently discussed than at this convention. Realizing that the activity of the present National Administration in trying to improve the conditions of business and of living throughout the land must be taken into consideration, the association passed resolutions indorsing the Stevens bill now before Congress.

President Charles H. Huesgen proved himself a model executive, always keen, fair, alert and masterful. The meetings profited by his vigorous personality; he was the inspiration and backbone of the convention.

The committees on resolutions, on statistics regarding



THE SOCIAL FEATURE OF THE DEALERS' CONVENTION

business catering to professional photographers, on the same concerning amateurs, on membership, on auditing and on nominations performed their tasks most creditably.

As to the result of this convention, it is generally conceded that its influence will be far-reaching, and that much has been done in blazing the way towards larger and better business for the photographic dealer, and towards greater satisfaction on the part of the purchasing public.

THE NEW OFFICERS

President, E. H. Goodhart, Atlanta.
First Vice President, H. M. Fowler, Cleveland.
Second Vice-President, W. F. Pinkham, Boston.
Third Vice-President, O. C. Reeder, Kansas City.
Fourth Vice-President, F. E. Gatchel, Louisville.
Secretary, G. E. Cross, Louisville.
Treasurer, G. L. Kohne, Toledo.
New York was voted to be the next place of meeting.

EXHIBITORS

Albany Card & Paper Mfg. Co., Photographic Mounts, Albany; Albany Chemical Co., Photo-Chemicals, Albany; Allendorf Co., Moia Camera Lenses and Prisms, Cleveland; Allison & Hadaway, Polychromide Process, Perchlora Flashpowder, Newman & Guardia Cameras, Marion & Son's Dryplates, New York; American Cinematograph Co., Motion-Picture Apparatus, Chicago; American Paper Goods Co., Photo-paper goods, Kensington, Conn.; Ansco Co., Ansco Cameras, Cyko and Cykoro Papers, Binghamton, N. Y.; Bausch & Lomb

Optical Co., Lenses, Balopticons and Projection-Apparatus, Rochester; Bell & Howell Co., Motion-Picture Apparatus, Chicago; Berlin Aniline Works, Photo-Chemicals, Agfa Flashlamps, Flashpowder, New York; Burke & James, Inc., Mfrs. of Photographic Specialties; Voigtlander & Son and Dallmeyer Lenses, Chicago; Burroughs-Wellcome Co., Tabloid Chemicals, New York; W. Butcher & Sons, Ltd., Pocket Folding Cameras and Reflex Cameras, London, England; E. S. Caywood, Flashlight-Apparatus, Philadelphia; Central Dry-Plate Co., Dryplates, Photo-Chemicals, St. Louis; A. M. Collins Mfg. Co., Card-mounts, folders and novelties, Philadelphia; Crown Optical Co., Lenses, Rochester; Dennison Mfg. Co., Tags, labels and fancy goods specialties, Chicago; Engel Mfg. Co., Photo-Art Corners, Chicago; Ernemann Photo-Kino Works, Cameras and Motion-Picture Apparatus, New York; Felsenthal & Co., Life-Motion Picture Camera, Chicago; Fiberloid Co., Photoloid, New York; Forbes Dry-Plate Co., Dryplates, Rochester; G. Gennert, Ensign Cameras and Films, Imperial Dryplates and Motion-Picture Apparatus, New York; C. P. Goetz Amer. Optical Co., Goetz Lenses, Dagor, Celor, Syntor High-Grade Amateur Pocket-Cameras, New York; C. H. Graves Co., Art-Publishers, Philadelphia; Gundlach-Manhattan Optical Co., Cameras and Lenses, Rochester; Haloid Paper Co., Photo-papers, Rochester; Hammer Dry-Plate Co., Dryplates, St. Louis; Heinn Co., Photo-Albums, Milwaukee; Herbert & Huesgen Co., Paget Plates, Hydra Plates, Steinheil Lenses, Tourist Multiple Camera, New York; Ilex Optical Co., Ilex Lenses and Shutters, Rochester; International Photo-Sales Corp., Ica Cameras, Carl Zeiss Lenses, Ilford Plates, Intona Paper,

New York; Japanese Water-Color Co., Peerless Japanese Transparent Water-Colors, Rochester; J. L. Lewis, Barnet Plates, Seltona Papers, New York; Lafbury Co., Euryan Lenses, Chicago; Mallinckrodt Chemical Co., Chemicals, St. Louis; Meyer Camera & Instrument Co., Inc., Microscopes, Motion-Picture Projectors, Polygon Miniature Cameras, American Agents for Rietzschel's Polygon Cameras and Lenses, New York; Motion-Picture Apparatus Co., Motion-Picture Apparatus, New York; Geo. Murphy, Inc., Photographic Specialties, Ross Lenses, Carbon Tissues, New York; H. H. McIntire Co., McIntire Photo-Printing Machine, Chicago; McIntosh Stereopticon Co., Projection-Apparatus, Chicago; Nicholas Power Co., Motion-Picture Apparatus, New York; Pathé Frères, Pathéscope Films and Cameras (Kinematographs for the home), Motion-Picture Apparatus, Paris, France; Photo-Cines Co., Motion-Picture Apparatus, New York; Photo-Products Co., Instanto Paper, Chicago; Pinkham & Smith Co., Smith Soft-Focus Semi-Achromat, Boston; Precision Machine Co., Simplex Projectors, New York; Prosch Mfg. Co., Flashlight-Apparatus, New York; Reflex Camera Co., Reflex Cameras, Newark, N. J.; C. B. Robinson & Sons, Studio-Furniture, Grand Rapids, Mich.; Schering & Glatz, Duratol and Assur Colors, New York; Seavey & Co., Backgrounds, Chicago; Seneca Camera Mfg. Co., Cameras, Lenses and Shutters, Rochester; J. H. Smith & Co., Victor Flashlight Specialties, Chicago; Victor Animatograph Co., Projection-Apparatus for the Home, Davenport, Ia.; Visible Photo-Printer Co., Automatic Printer, New York; H. C. White Co., Enlarging- and Projection-Apparatus, Nitrogen Lamps, No. Bennington, Vt.; Whyte-Whitman Co., Motion-Picture Apparatus, New York; Wollensak Optical Co., Lenses and Shutters, Rochester; Wold Air-Brush Art Shop, Air-Brushes, Chicago; Worcester Envelope Co., "Berwick" System, Worcester, Mass.; Photo-Cines Co., Motion-Picture Apparatus, New York; Automatic Developing & Printing Co., Newark, N. J.

The Film-Patent Case Settled

It is reported in the daily press that a monetary settlement, the amount of which is known only to the persons directly concerned, has been made in the matter of the Goodwin roll-film patent, over which the Eastman Kodak Company and the AnSCO Company fought for years until the Federal Court of Appeals recently decided in favor of the latter.

The suit involved the use of the Goodwin patent, claimed by the AnSCO Company since 1898, and appears to have covered all cartridge-films, film-packs and cinematograph-films made by the Eastman Kodak Company.

Sunday Sitzings

THE question of making sittings on Sunday is causing much concern to photographers in many cities throughout the country. As a rule, high-class portraitists close their studios on Sunday, anyway; but a law which forbids photographic Sunday-business seems just as fair for photographers who cater to the working-people unable to sit for their portraits in week-days, as it is for the working-people themselves, when one reflects that in these same places a large business is done on the Lord's Day in the sale of cigars and tobacco, confectionery, newspapers, etc. We hear of cases where photographers are arrested for making sittings on Sunday, fined and have these fines remitted when it is proved that the sittings are absolutely indispensable both to photographers and this class of customers. The photographers should use every influence to have such an unjust law repealed.

Series II Cooke Lenses Improved

WE are advised by the Taylor-Hobson Company of some important improvements in their Series II Cooke lenses. These are the "universal" anastigmats made by this firm for high-speed photography in dull lights and, in fact, for all classes of work which demand lenses of large covering-power and keen definition at F/4.5. Not only have the lenses been improved in defining-power throughout the plates for which they are listed, but the circle of illumination has been increased so that these high-speed lenses may be used for wide-angle work on larger plates. Moreover, the mounting has been perfected, and the lenses are mounted with such compactness that they can be fitted to all makes of cameras capable of receiving high-speed lenses.

Notwithstanding these developments, the selling-price has been reduced appreciably, and the Taylor-Hobson Company claims that it now offers the most complete as well as the best line of high-speed lenses on the market.

A Standard Book on Nature-Study

IN response to numerous requests for copies of L. W. Brownell's admirable book, "Photography for the sportsman-Naturalist," we are glad to state that we can furnish copies to any one interested at \$2.20 net, postpaid. This superb volume contains 311 pages and numerous original photo-illustrations of nature-studies with instructions how to photograph them. This important work was carefully reviewed in April PHOTO-ERA.

Photographers' Row

THE tendency of high-class portrait-photographers to establish their studios near one another, generally on some prominent business-street, is well known. For instance, there is a photographers' row of them on Chestnut Street, Philadelphia, and another on Fifth Avenue, New York.

Boston, oddly enough, has not as large a number of first-rank portrait-studios as the size of its population would seem to demand. However, it has a formidable row of studios on Boylston Street, where former private residences have been converted into stores and office-buildings. Beginning at the farther end of Boylston Street, and adjacent to the Back Bay residential district, is the studio of J. H. Garo, opened about twelve years ago. Next in order are those of H. H. Pierce, Mildred Holt, Charles W. Hearn, John A. Lorenz, Louis Fabian Bachrach, Morris Burke Parkinson (recently removed to Brookline with branch studio on Milk Street), Arthur A. Glines, Frank Place, Baldwin Coolidge, Clarissa Hovey, Alice Austin, Mrs. J. C. Fairchild, Charles A. Hoyle, A. L. Jamieson, Alfred E. Smith, Mary L. Patten, Helen M. Murdoch, Aram Kazanjian, Newcomb & Robinson.

For Motion-Picture Enthusiasts

A LARGE number of photographers, including most professional men engaged in commercial work, and also many advanced amateurs, are becoming greatly interested in motion-picture work. It is a fascinating branch of photography and one yielding large monetary returns. Those interested will find Ford's new book well worth the price, 35 cents, postpaid. It does not purport to be an exhaustive or highly-technical treatise, but its forty-eight pages tell clearly and convincingly by word and picture how to make motion-pictures, together with all necessary formulae.

Atlanta

ATLANTA is seventy-four years old and was first called "Terminus," being a little village at the end of the Western and Atlantic Railroad. About the time that General Sherman reached Atlanta, the population was 10,000. To-day it is 185,000, and the 200,000 mark will be reached in a short time.

Atlanta has two hundred miles of modernly-equipped electric railway, six hundred manufacturing-plants and it covers twenty-six square miles.

It is reached by thirteen railroads over which one hundred and thirty-six passenger trains run daily.

Atlanta is justly called the metropolis of the "New South."

ATLANTA'S CLIMATE

Atlanta is ten hundred and fifty feet above the sea-level at the foot-hills of the Blue Ridge Mountains. Part of its water drains to the Atlantic Ocean and part to the Mississippi River. There is always a breeze and a bracing atmosphere.

The reports of the United States Weather Bureau show that the average temperature in June for the last thirty-four years has been 76 degrees, the highest temperature 98 degrees and the lowest 39 degrees.

General Sherman kept 100,000 men around Atlanta for six months and he declared that there was no place on the Continent where he could have kept so large a body of men in such perfect health.

This is the city which will entertain the convention of the Photographers' Association of America in June.

The Two London Exhibitions

THIS year the Royal Photographic Society will again hold its annual exhibition in the gallery of the Royal Society of British Artists, Suffolk Street, Haymarket, London, S. W., opening on August 24 and closing October 3. The latest date for receipt of exhibits by carrier is Friday, July 31; by hand Saturday, August 1 — in each case at 35, Russell Square, W. C. There are three sections of exhibits covering practically the whole field of photography: Section 1, pictorial photographs; Section 2, color-transparencies; and Section 3, scientific and technical exhibits, color-prints and natural-history photographs. In the pictorial section the selecting- and hanging-committee consists of Alvin Langdon Coburn, John H. Gear, H. Holerott, Furley Lewis, J. C. S. Mummery and J. B. B. Wellington. Color-transparencies, claiming pictorial as distinguished from scientific merit, will be judged by John H. Gear and H. Essenhigh Corke. Mr. C. E. Kenneth Mees has arranged to collect and forward American work intended for the Scientific and Technical Section. Photographs intended for this section should be sent so as to reach him not later than Friday, July 10, at Research Laboratory, Kodak Park, Rochester, N. Y. Intending contributors will do well to communicate with Mr. Mees at an early date and obtain the necessary entry-form.

The exhibition of the London Salon of Photography will open on September 5 in the galleries of the Royal Water-Color Society, 5a, Pall Mall East, closing October 17. The latest date for receipt of exhibits by carrier is August 19, parcels being addressed to Mr. C. H. West, 117, Finchley Road, London, N. W., but exhibits may be delivered by hand at the gallery on August 26. Prospectuses and entry-forms of the two exhibitions are now published and may be obtained on application to the respective secretaries, Mr. J. McIntosh, 35, Russell Square, and Mr. Bertram Park, 5a, Pall Mall East.

Furley Lewis

THE choice of Mr. Furley Lewis as the new president of the Royal Photographic Society, London, is universally applauded. Many of his admirers go so far as to declare that his incumbency honors the society, although the opposite may not be. Certain it is that no better selection could have been made. Mr. Lewis brings to his new position an honored name, authoritative professional knowledge, high artistic ideals, and an inspiring personality. This distinguished equipment should enable him to introduce needed reforms in the venerable R. P. S., whose popularity, prestige and finances are said to have declined seriously. Those who can turn conveniently to PHOTO-ERA of July, 1910, will enjoy Mr. A. H. Blake's high tribute to the artistic ability and high character of Mr. Lewis. The accompanying illustrations are examples of Mr. Lewis' eminent skill as a portrait-photographer.

Los Angeles City Hall Camera Club

A CAMERA club has been organized among the employees of the City Engineer's office, Los Angeles. It will be known as the City Hall Camera Club, Mr. W. C. Sawyer, Room 31, City Hall, secretary. The club desires to be placed on the mailing-list of manufacturers, dealers and others, in order that catalogs, price-lists, samples and the like may reach them as soon as they are issued. The club is not a large one, but it is made up of a few enthusiastic workers who, no doubt, will act more harmoniously than would a larger body.

The Boston Photo-Clan

THE third annual exhibition of the Boston Photo-Clan was held at the Garo Studios, Boston, March 15 to April 20. Seven members were represented. The show, as a whole, gave the impression of serious effort towards a high standard of artistic expression, but this proved to be true only in individual instances. Futile attempts to reach the goal were noticeable whenever the meritorious character of the original negative was sacrificed in the enlarging-process whether the aim was to obtain a soft-focus effect, resulting in loss of meaning, life and vibration; or whether the wrong printing-medium or an incongruous color was chosen. Brown is not a suitable medium to express the character of a marine; nor does blue or red give the illusion of a wood-interior. If black and white fail to interpret the spirit of the picture, the artist is in a dilemma. Then, again, in some cases the themes were not complete; they appeared to be fragments, lacking unity and significance. Henry Eichheim came nearer to nature in his landscape (Amisquam), but his enlarged portraits were not convincing. Maurice W. Parker had only three prints, of which "Morning Landscape" charmed by its delicate atmospheric effect. Dr. Harry B. Shuman's eight prints evinced sincere artistic feeling and warmth of expression (The Wood-path), but lacked fluency of composition. Dr. W. W. Smith, a new-comer, showed five prints vigorous in design and consistent in treatment. Of these, a view in Cherbourg and a group of sand-pines in Syria were quite distinctive. Dr. C. T. Warner showed twelve 5 x 7 direct prints, the smallest on view, in which all the original sweetness, beauty and life were fully preserved. Mr. Garo's twelve gum-prints actually predominated by their overpowering mastery of grasp, interpretation and technique. Whatever the theme — a portrait, a pastoral or a still-life, it pulsed, rejoiced and charmed. Under such leadership, the rest are sure to advance towards greater heights of achievement.

1914 Kodak Advertising-Contest

\$3,000 in Cash Prizes

PHOTOGRAPHERS are becoming better illustrators. Our 1913 Kodak Advertising-Contest brought us, by far, better pictures than any of our previous contests. There was a greater diversity of ideas, and ideas are really the important thing in these competitions, though the pictures must also show good photography. Nevertheless, we received many pictures that were absolutely devoid of the advertising-idea, pictures that were merely good landscapes or good portraits, and except for the fact that they were photographs, connected in no way with Kodak advertising.

The successful pictures are always the ones around which the advertising-man can write a simple and convincing story of the witchery of Kodakery and the simplicity of the Kodak system of amateur photography.

EASTMAN KODAK COMPANY.

TERMS OF THE 1914 CONTEST

1. Each picture is to contain a figure or figures and is to be suitable for use as an illustration in advertising the Kodak or Kodak system of amateur photography.
2. Each print in the Grand Prize Class and Class "A" must be from a negative 5 x 7 or larger. Each print in Class "B" must be from a negative 3 1/4 x 5 1/2 or 4 x 5 or larger.
3. PRINTS ONLY are to be sent for competition — not negatives.
4. Prints must be mounted, but not framed. (Mounts should show about 1 inch margin.)
5. No competitor will be awarded more than one prize. (This does not prevent a competitor from entering as many pictures as he may desire.)
6. Due and reasonable care will be taken of all non-winning prints and, barring loss or accident, they will be returned to their owners at our expense, but we assume no responsibility for loss or damage.
7. The negatives from which all prize-winning prints are made are to become the property of the Eastman Kodak Company, and are to be received by it in good order before payment of prize-money is made.
8. Contestants who are awarded prizes must also furnish to us the written consent of the subject (in case of a minor, the written consent of a parent or guardian) to the use of the picture in such manner as we may see fit in our advertising, as per the following form :

For value received, I hereby consent that the pictures taken of me by _____, proofs of which are hereto attached, or any reproduction of the same, may be used by the Eastman Kodak Company or any of its associate companies, for the purpose of illustration, advertising or publication in any manner.

[Use this form for a minor]

I hereby affirm that I am the Parent—Guardian of _____, and for value received, I hereby consent that the pictures taken of him—her by _____, proofs of which are hereto attached, or any reproduction of the same, may be used by the Eastman Kodak Company or any of its associate companies for the purpose of illustration, advertising or publication in any manner.

NOTE. — Blank forms will be furnished on application.

9. All entries should be addressed to Eastman Kodak Company, Advertising-Department, Rochester, N. Y. Entries from Canada should be sent to the Canadian Kodak Company, Toronto, Canada.

10. In sending pictures, mark the *package* plainly, "Kodak Advertising-Contest," and in the upper left-hand corner write your own name and address. Then write us a letter as follows :

I am sending you to-day by Express—Mail, charges prepaid _____ prints. Please enter in your Kodak Advertising-Competition. Class _____

Yours truly,

Name _____

Address _____

11. The name and address of the competitor must be legibly written on a paper and enclosed in a sealed envelope in the same package in which the prints are forwarded. There is to be no writing on prints or mounts.

12. We will promptly acknowledge the receipt of pictures, and when awards are made, will send each competitor a list of prize-winners.

13. Recognized professional photographers, including commercial and newspaper-photographers, in short all persons (except those entitled to enter the Grand Prize Class) depending upon the use of a camera for a livelihood, will compete in Class "A." Class "B" is open to amateurs only.

14. This contest will close Nov. 1, 1914, at Rochester, N. Y., and October 20 at Toronto, Canada.

THE PRIZES

Grand Prize Class, First \$500; Second \$400; Total \$900.

Open only to Professional Photographers who have won prizes in the Professional Class in previous Kodak Advertising-Contests.

Negatives, 5 x 7 or larger.

CLASS A

Professional Photographers Only *

Negatives, 5 x 7 or larger

First Prize	\$500.00
Second Prize	300.00
Third Prize	200.00
Fourth Prize	150.00
Fifth Prize	100.00
Sixth Prize	50.00
Seventh Prize	50.00
Eighth Prize	50.00
	<hr/>
	\$1,400.00

CLASS B

Amateurs Only

Negatives, 3 1/4 x 5 1/2 or 4 x 5 or larger

First Prize	\$300.00
Second Prize	200.00
Third Prize	125.00
Fourth Prize	50.00
Fifth Prize	25.00
	<hr/>
	\$700.00

* Winners in 1907 and in Class "A," 1908, 1909, 1910, 1911 and 1913 are not eligible.

Note also paragraph 13.

First of all, it should be remembered that these prizes are not offered for the sake of obtaining sample prints or negatives made with our goods. *Merely pretty pictures, merely artistic pictures will not be considered.* The pictures must in some way connect up with the Kodak idea — must show the pleasure that is to be derived from picture-taking, or the simplicity of the Kodak system, or suggest the excellence of Kodak goods. Must, in short, help to sell Kodak goods, by illustration of some one of the many points in their favor.

The jury will be instructed to award the prizes to those contestants whose pictures, all things considered, are best adapted to use in Kodak (or Brownie Camera) advertising.

As reproductions of the pictures will often be in small sizes, too much detail should not be introduced.

Pictures for reproduction should be snappy — vigorous, for they lose much by the half-tone process.

Where apparatus is introduced, it must be up-to-date. If you haven't the goods, you can borrow.

It is highly probable that we shall want to procure some negatives aside from the prize-winners. In such cases special arrangements will be made.

THE JUDGES

The Jury of Award will consist of photographers and of advertising-men who are fully competent to pass upon the work submitted. Full attention will be paid therefore to the artistic and technical merit of the work as well as to its strength from an advertising-standpoint. Announcement of the names of the judges will be made later.

Winnipeg Camera Club

The fourth annual exhibition is to be held in the Civic Art Gallery of the city of Winnipeg, under the auspices of the Civic Art Committee, from June 2 to 13, 1914. Exhibits must be delivered, carriage paid, to the Secretary, J. M. Iredale, Winnipeg Camera Club, Industrial Building, Winnipeg, on or before May 23, 1914, and an entry-form, properly filled out, must be mailed separately to reach him before that date. Entry-forms will be mailed on request by the secretary. Exhibits from points outside Canada must be sent by mail, thus avoiding Customs formalities in receiving and returning. No fee is charged for entrance. Pictures must be mounted, but may be framed. Each must bear, on the back, the title, the exhibitor's name and address, and club, if any, to which he or she belongs. All pictures must be the bona-fide production of the exhibitor.

The Jury of Award will consist of three competent and disinterested persons. Their decision shall be final. Any number of prints may be submitted, but only such as are in the opinion of the Judges show distinct artistic merit will be hung. Each exhibitor will be furnished with the catalog issued by the club, which will be official notification of acceptance or rejection.

Gold, silver and bronze medals will be awarded to the best three pictures in the exhibition. The McMillan Challenge Cup will be awarded to the best picture by a member of the Winnipeg Camera Club, the winner to hold the cup for one year. Certificates will be awarded to all exhibitors whose work receives Honorable Mention.

The club will assume no responsibility for loss or damage, but every care will be taken of the exhibits. Exhibits will be returned as soon as possible after the exhibition, provided a sufficient amount is enclosed to cover return-postage.

CAMERISTS generally owe a debt of gratitude to the great American photographic manufacturers for the annual prize-competitions in which many thousands of dollars are awarded. Not only do they stimulate continued and greater interest in photography, but they help retail dealers by creating a considerable extra demand for photographic supplies. The prizes are so many and of such substantial amount that many thousands compete and the business thus created is really worth while, running up to a big figure. From the competitor's standpoint, also, a prize is well worth having; it is equivalent to the net profit of a considerable period of time, and the distinction of having won it from thousands of other aspiring camerists is attended with well-merited mental satisfaction.

We wonder if the possibilities to capitalize success in the Ansco Company's Loveliest Women Contest have been realized by professional portraitists at large? To be the chosen photographer of one of America's fifty loveliest women should certainly be as much an honor as to be that of one of America's greatest men; moreover, to have been such is a distinction capable, we believe, of attracting much lucrative business. When the awards are to be made by a jury which will see not the women themselves, but the photographs, the latter must be splendid, indeed, in order to win. Rivalry among acknowledged beauties is proverbial, and it seems logical to believe that if any studio-proprietor will, in a proper manner, make known the fact that the cream of his season's work is to compete in this contest, and that any prize-winning portrait will be exhibited at the Panama-Pacific Exposition, he will have plenty of business to attend to. Obviously, the matter is one of delicacy; it cannot be handled through newspaper-advertising. Suitably engraved announcements mailed to a selected list of names would be the better course, and in the wording of these a nicely-phrased appeal to local pride in so interesting and unusual a matter might counteract any fear of undue personal exploitation on the part of the prospective sitters.

Photographers seeing in this contest an opportunity to stimulate new business, in a novel and dignified manner, will find further information both in a news-item and advertisement in PHOTO-ERA for April, or detailed particulars will be sent upon request by the Ansco Company, Department G, Binghamton, N. Y.

Photographic Society of Philadelphia

THE new rooms of this society, at 1615-1617 Sansom Street, now offer members the very latest and most up-to-date equipment possible to get — enlarging- and lantern-slide-rooms with electric light-equipment, a gaslight paper printing-room equipped with a F. & S. professional printer, besides darkrooms, large negative and print washing-boxes, print drying-closets, copying-camera, a large sunny printing-room, library, meeting- and exhibition-room and a most up-to-date studio, fully equipped for the making of either daylight or electric light pictures.

Arrangements have now been made to increase the membership, and applications signed by at least one of the present members will be received gladly. These applications will be acted upon in the order of their receipt at meetings, the second Wednesday in each month. Visitors are admitted from 9 to 12 and from 1 until 5. The janitor will gladly show any one interested through the rooms. Initiation-fee and annual dues are each \$15. The present officers include Henry P. Bailly, Pres., and Harold F. A. Starr, Secy.-Treas.

LONDON LETTER

CARINE AND WILL A. CADBY

WE referred on this page, some months back, to the wonderful series of photographs illustrating the two volumes of Captain Scott's last South Pole expedition. Most of them were taken by Mr. Ponting, enlargements of which have been on exhibition at the Fine Arts Society's Galleries, New Bond Street, for over three months. So interested is the public in these photographs, that it has now been decided to continue the exhibition for an indefinite period.

The photographs, themselves, are immensely attractive, as Mr. Ponting has the gift of seeing things pictorially, and the skill to reproduce his conceptions on paper. But apart from this, they make a tremendously strong appeal to English people because of the tragic fate that overtook Captain Scott and some of his followers.

The prints have been duplicated and have been shown at Manchester and Glasgow, and the Fine Arts Society has arranged for an exhibition to be held at Messrs. Moulton and Rickett's Gallery, Fifth Avenue, New York, which will probably be open before this letter is in print. It seems a pity that some scheme has not matured which would have given the country a permanent collection of these unique photographs.

Before leaving Switzerland, we had occasion to use some of the new Eastman portrait-films. They are thick, stiff, cut films used in the dark slide (plate-holder), with a separate cardboard backing. We found the arrangement to work very well, the film keeping perfectly flat in the holder. The directions enclosed recommend a special pyro developer made up in three stock-solutions. Being far distant from photographic chemists, at the time, we had no alternative but to use the Kodak metol-hydroquinone formula which we had with us in glass tubes. This worked quite satisfactorily, and the films were fixed along with a couple of film-packs that were developed at the same time, in ordinary hypo, although a new acid fixing-bath is strongly insisted on in the directions. In spite of this rough treatment, very good negatives were the result of our first experiment, and we consider these films a useful addition to a traveling photographer's outfit. Their advantages as to portability are very evident to us, just now, as the memory is still very fresh of the weight and fragility of the twelve dozen half-plate glass negatives which we had to watch over and guard all across Europe. The speed of the films is not given on the packets, but one would imagine that they are faster than the ordinary roll-films supplied by the Kodak people, though we have not, ourselves, made any exact tests. When dry, they have a somewhat pronounced curl, with the film side outwards, but this disappears after a few hours' pressure in the printing-frame. They have a convenient dodge for showing at once and in the dark which is the film side. A V notch is cut in one edge, and when this shows at the upper right-hand corner, the film is lying face up. The illustration given is a snapshot, on one of these films, of a Swiss boy who happened to come along. We had used them for landscapes, but as they are called portrait-films, we thought it only fair to try them as such, as well.

Another convenient contrivance is the inclusion with each packet of three stiff, fireproof envelopes, the idea being that each envelope will store four film negatives and keep them flat. We only wish that we needed

store-place for every dozen plates we use. We are much afraid that before long we shall have a few of these well-made envelopes set free for other purposes!

One of the first signs of renewed activity in the photographic world comes to us in the shape of an application for prints for the Paris Salon of Photography for which Mr. F. J. Mortimer is collecting English Work. When we mention the Paris Photographic, Salon, we naturally think of M. Demachy who has been the life and soul of the Photo-Club de Paris and its exhibitions for years. Indeed, pictorial photography, the world over, is under a heavy debt to him, for probably he has done more for its advancement along the lines of the gum and oil processes than any other man. Continually here in England we come across amateurs



A SWISS YOUNGSTER

THE CADBYS

who have ventured to call on the great apostle of these flexible and fascinating processes who never seems to refuse help and encouragement to those who ask.

The prizes in the great Kodak Competition have at last been announced, and nearly all the prize-winners seem to possess foreign names and addresses.

Mr. Furley Lewis has been elected president of the Royal Photographic Society, on which event every one is congratulating everyone else — Mr. Lewis on being raised to the proud position and the Royal Photographic Society in getting such a good man. Mr. Furley Lewis is a man of many friends and is as kindly and public spirited as he is popular; he is also one of our foremost portrait-photographers, and we feel that some of his work will live and be still more valuable in the future.



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The Tessar is the arch enemy of failure—it makes all days bright. You have fewer failures from lack of light.

Tessar Ic-F:45—the lens for speed—is the standard lens for the reflecting camera, home portraits, and all work demanding ultra-speed. Its speed is twice as great as *Iib Tessar*.

Tessar Iib-F:63—the lens for the compact hand camera—is the standard anastigmat equipment in connection with the Compound shutter. Double the speed of ordinary lens equipments.

Full information regarding lenses and sample prints supplied upon request. Try a Tessar on your camera. Ask your dealer.

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BERLIN LETTER

MAX A. R. BRÜNNER

IN some recent issue of PHOTO-ERA mention was made of the death of Herr Wolf Capek, editor of *Photographie Fuer Alle*, author of several books and otherwise prominent in the photographic world. And while we were just discussing the regrettable event, the news reached us that the director of the Kunsthalle, at Hamburg, Professor Lichtwark, had died. He was known as one of the best friends of amateurs. In 1893 we had the first international photographic exhibition in Germany, held in the Art-Museum, Hamburg. Lichtwark, as the director, delivered three comprehensive lectures about this new art and used his influence to further it. He also published a book on the artistic features of amateur pictorial work, which even now, when a large amount of photographic literature exists, assumes a prominent place, and is considered a model book on the subject of amateur photography.

Spring has come, and again a large number of Americans will cross the ocean, "to do Europe," as they term it. Frequently in the daily, as well as in the trade press, cases have recently been reported about tourists from abroad who have been arrested for "espionage," particularly if they were equipped with a camera. Our papers usually condemn such laws and the way they are enforced, and proposals for betterment are made. Besides, the league of German Amateur Clubs has submitted several petitions with the view to save photographers from unpleasant quarrels with the authorities. However, it must be admitted that the safety of a country stands higher than the pleasure of tourists. In Germany, and in most other countries, every fortress is surrounded by a zone which may extend up to ten kilometers in diameter. The inner circle can be crossed only with the permission of the commanding officer, whereas the outer one does not present serious difficulties as it contains mostly public thoroughfares. Yet, in spite of it, strangers must be careful, and absolutely abstain from taking pictures, making sketches, etc. Sometimes the mere carrying of a camera with one may cause trouble. The authorities are exceedingly watchful and seem to show a special interest in the telephoto lens. When, despite of every precaution, one is unlucky enough to fall into the hands of some sentinel, it would be no good plan to get excited and try to escape. It is always advisable to carry some papers of identification with one. To the average layman certain portions of a fortified place may appear as of minor importance, and he thinks to be entitled to photograph them. The authorities, however, do not make any exceptions. The above-cited Amateurs' League has collected the rules of all countries as regards what places are barred from the invasion of the camerist. It is hoped, therefore, that the dangerous zones will be more clearly marked by means of posters and signboards. Particulars appear from time to time in the organ of that society. A close inspection of the rules of the various countries has brought out the fact that the regulations of the German army administration are not stricter than those of other countries, and this applies also to the manner of their enforcement. From abroad we hear sometimes unpleasant events — from Italy, the British colonies and Japan, for instance. The forbidden zone around Singapore has a radius of eight miles and contains many pretty promenades and hotels, so that many an amateur feels tempted to take snapshots, the plates of which are often confiscated, much to

the displeasure of the quite surprised camerist. The danger is so great that the steamship-companies have erected posters of warning. In addition, there as everywhere else, it is risky to photograph resting, marching or practising soldiers, for one never knows whether the soldiers are using a new gun or other equipment. Even carelessness may result in a fine.

In nearly every Berlin Letter I have referred to the doings of our camera clubs. Their large number has been augmented lately by a society which differs from the others. Its name is Jung-Deutschland's Lichtbildner (Amateurs' Club of Juvenile Germany), with headquarters at Munich. This is not to be confounded with the Society of Juvenile Camera-Friends founded a year ago in the Imperial capital. The new club accepts as members boys between thirteen and twenty years of age, although adults may become honorary members, provided they have done much good work for the welfare of the club. Its purpose is the publication of literary and technical articles, also pictures in the club's organ, *Das Bild*, exchange of prints among the members, exchange of queries and replies under supervision of the management, prize-competitions, exhibitions and meetings. The yearly fee is only fifty cents, a ridiculously small sum. In several large cities local branches have been founded, and their number is steadily increasing. Perhaps the most interesting feature of the Juvenile Society is the sale of pictures to periodicals, book-publishers, etc. In all other clubs the members do not make any money out of their pictures, but if they desire to do so, they transact the business directly with the publishers. In the above-named clubs the young members, who obviously have no business-experience, are asked to submit suitable pictures to headquarters (at Munich), the officers of which, owing to their great experience, select the most salable prints and forward them to a paper which will be most likely to accept them. For each batch of prints sent in by a member, a fixed charge of fifty pfennigs (12 cents) is made. If a picture is sold, twenty per cent goes into the society's treasury, the rest to the amateur. If a picture is refused, it is sent to some other magazine and, if entirely unsuccessful, returned to the sender. The same happens with such pictures which, in the opinion of the officers, are not salable at all. Through this scheme much annoyance, payment of postage and disappointment is avoided, as the younger members would scarcely be able to find a right market for their snapshots.

In conclusion, I wish to mention a novel drying-apparatus for negatives, invented by a Frenchman. It consists of a horizontal disc, like that of a phonograph, to which the wet negative is fastened with clamps. The whole is covered by a case to keep off dust. As soon as the motor is set in motion — this can be done by electricity or a strong spring, or even by hand — the moisture is pressed through the centrifugal force towards the outside, and this same process is going on as in a cream-separator. The device is particularly suitable for autochrome positives which require a speedy drying. If these have been immersed in a thirty-percent alcohol-solution, they will be dry within two or three minutes. The machine is also useful for color-sensitive plates and during the casting of negatives of the Lippman process, to throw off the superfluous quantity of emulsion.

Bearding the Lion

Editor: No, we cannot accept your article. For one thing, it is written on both sides of the paper.

Would-be Contributor: You needn't be so stiff with your rules. You print on both sides of your paper.

Boston Transcript.

WITH THE TRADE

The Press-Photographer and His Editor

WHEN the news-editor of a daily paper assigns a photographer to cover an important news-event, he writes the assignment in a book and forgets about it until the finished photographs are laid upon his desk.

Between the time the assignment is given to the photographer and the prints are delivered much may happen. In many cases, much does happen. In the opinion of the press-photographer the average editor is a sublimated ass who expects the impossible and gets it. He is a small-sized Czar who lays things out by rule and will not admit of failure. When he casually asks the photographer to get a good picture of the bride at the Vandergraph wedding, he ignores the possibility of interference on the part of the police; the objections of the relatives and of the bride herself; forgets the awning leading from the limousine-door to the inside of the church; that the church is on the shadow-side of the street; that it is raining cats and dogs and that the photographer has just one-hundredth of a second in which to catch the bride as she volplanes from the machine to the red-carpeted interior of the decorator's tunnel leading to the altar.

Incidentally the editor, in the security of his secluded den, passes with a shudder all consideration of dark-room difficulties, chemical equation, lens- and shutter-equipment, printing-lights, poor quarters and Dame Fortune, who must be propitiated if the shutter happens to choose a scant 1-1000 chance in the 1-100 opportunity to register the particular bridal turn of ankle, sweep of drapery and virgin expression desired by his editorial nibs.

Small wonder, then, that the men who tell the story of the news, so that all men may see and understand, have been called by a famous writer, "the pirates of the press." They take everything they are told to take, and take it as in duty-bound. And the same rapacity shown in the taking of the pictures is shown in the prompt assimilation of any new things in the photographic field which will help to make for better pictures and editorial commendation. That is why virtually every press-photographer orders a case of A. & H. Record Plates as soon as he has tested a sample package. Speed 500 H. D.

Studio-Portraits Regardless of Weather

IN many a studio the weather forms a constant source of anxiety. On dark days sittings must be postponed and the operator is overworked and hurried in pleasant weather. Not so in studios equipped with the Victor Studio Flash-Cabinet; there every day is a working-day, and for an outlay of only \$75. It renders the operator absolutely independent of daylight for making the very finest bust, half-length, full-length and group pictures in any desired lighting. This cabinet is to be found in many of the leading studios of the country where its economy and efficiency have been proved conclusively. Exposures are made in $\frac{1}{50}$ second so that desired poses and fleeting expressions can be caught with no danger of lost negatives due to movement of the subject. But three grains of Victor Flash-Powder are required for cabinet-work. This costs one-third of a cent, gives no report and but little smoke. Electric lights are used for focusing and to vary the light-effects.

A New Live Wire

MR. J. A. DAWES, the new manager of the Promotion of Trade Department of the Wollensak Optical Co., in a letter, assures us that the splendid policy which his department has followed in the past will be carried on under his personal guidance. The Promotion of Trade Department is maintained for the sole purpose of helping those who are interested in the Wollensak products, and Mr. Dawes is always on the alert for an opportunity to assist in any way possible. The Wollensak Optical Co. backs up all its goods with the broadest guaranty, and grants a liberal trial-privilege on all lenses. If in doubt, write to Mr. Dawes about it.

The Three-In-One Lamp

AMATEURS always welcome ingenious devices that make for compact storage of the accessories of their chosen hobby. For \$2 the O.K. Sales Company now furnishes in one piece of apparatus a printing-lamp, a ruby-lamp and a flash-sheet or cartridge-holder. It is a clever little device to save prints, time and money, ensuring better pictures in the easiest way.

New Kodak-Specialties

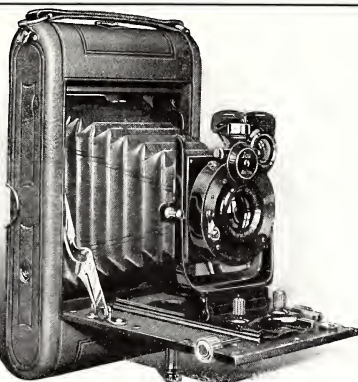
A VERY compact and useful photographic accessory has recently been placed on the market and is meeting with enthusiastic approval. It is the Kodak Magnesium-Ribbon Holder manufactured by the Eastman Kodak Co., Rochester, N. Y.

The magnesium-ribbon is wound on a roll inside the holder and is pushed forward by the thumb until a piece of the desired length projects from the holder. This is ignited by holding the projecting ribbon in a flame, the light produced being an intense white—particularly suitable for printing Velox or making lantern-slides.

The ribbon is contained in the holder in such a manner that only that part which projects will burn; thus the amount of light for each exposure may be controlled accurately by measuring the projecting ribbon.

The device will be a boon to campers, tourists and others who find themselves in places lacking a suitable light for quick printing. The bright light of the magnesium is not only preferable to an oil-light but is superior to either gas or electricity for accuracy and speed. A small alcohol-lamp is supplied for use in burning the magnesium-ribbon. Both may be had from your dealer at a nominal cost.

There are two little attachments, advertised from time to time in our pages, which every camerist should own and make good use of during the coming season. The one will so materially increase the efficiency of his Kodak as to make it capable of doing the work of two cameras, while the other will, in many instances, improve the artistic quality of negative, made with its aid, about one hundred per cent. We speak of the Kodak Portrait-Attachment and the Kodak Color-Screen. One never realizes the advantages of a portrait-attachment until he has used one for portraits and other interesting close work. And the same may be said of the Kodak Color-Screen. It is scientifically made and particularly suitable for reproducing cloud-effects in the negative as the eye sees them. Instantaneous exposures are readily made in one-tenth of a second in bright light.



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With Carl Zeiss Icar lens, F/6.3, $5\frac{1}{4}$ inch focus and Compound Shutter.

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the daylight, fresh-air papers.

Sample prints on either paper on receipt of your name and address

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The "SMITH" LENS

"Soft-Focus Semi-Achromat"

For a soft, vibrant, atmospheric image, serious workers agree on the "Smith" quality. With the "Smith," photography loses its soulless and mechanical literalness, and becomes truly a means of personal expression.

An enthusiastic worker writes thus, "I am one of those unpractical artists, with all the feelings but without the ability to execute. If I had lived a generation ago I should have missed a great deal of pleasure, because within the last twenty years mechanical means have been put within the reach of such as I to enable them to express themselves. Such lenses as the 'Smith' are putting it within my reach to make pictures, whereas if I had to depend upon the brush or pencil I should go pictureless."

The "Smith" lens is a tool and must be skillfully handled; it is the means to an end.

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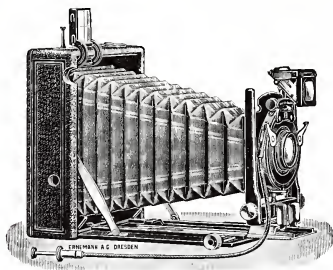
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Simplex Specialties

UNDER the trade-mark "Simplex," the Multi-Speed Shutter Co., 114 East 28th Street, New York City, is manufacturing and putting on the market a varied and interesting line of up-to-date specialties. These include precision-cameras, view-cameras, Multi-Speed shutters, anastigmat lenses, flashlight-attachments, photo-chemicals, motion-picture cameras and projectors, Multi-Exposure camera, "Special" dry-plates, Multi-flex lamp and motion-picture chemicals.

Of them all the \$50 Simplex Multi-Exposure camera, taking 800 pictures on standard motion-picture film, is most ingenious and promises to interest amateur photographers most, for it provides all the sensitive material ordinarily required for an extended vacation-trip with one loading of the camera. The wonder is how such a camera can be manufactured at the price.

The Simplex Motion-Picture camera, another notable instrument in this varied line, promises to do much to supply the growing demand for motion-pictures of the family and in the home.

Successful 1913 Business

THOSE who failed to do record business in 1913 have themselves to blame, apparently; at least such is the belief of sales-manager, A. A. Dailey of the Photo-Products Co. His policy of selling Instanto and Platara papers direct to the consumer, thereby eliminating the middleman's profit, has appealed strongly to the buying-public and success in big figures has been the result. The new bromide paper, known as Regal and a welcome addition to the line, will be handled in the same manner, as well as the linen-surface Platara.

Autochrome Stereographs

HOWEVER fascinating is stereoscopic photography, particularly the enjoyment of the completed results, the element of color gives added pleasure, and when the actual stereographs are autochromes, the result is an approximation of nature itself.

The revival of stereoscopic photography has received a strong impetus through the wonderfully efficient and compact pocket stereo-cameras now on the market, and also through the enthusiasm with which practitioners are using autochrome plates for the purpose. Autochrome stereographs yield a degree of pleasure which is difficult to put in words; they must be seen to be enjoyed and appreciated. The process is as simple as making ordinary autochromes, particularly with the aid of the celebrated Richard Verscope. The latter, together with a practical demonstration of its *modus operandi*, and a large and beautiful collection of autochrome stereographs, are on public exhibition at the office of the Lumière-Joula Co., 75 Fifth Ave., New York, N. Y. Everybody is welcome.

Cooper Hewitt Lamps in Motion-Picture Work at the Selig Studio

OVER one hundred and fifty dealers and manufacturers attending the Chicago Convention (and the wives of a few of them) took the special cars sent by the Selig Polyscope Company promptly at 2 p.m., Thursday, and journeyed out to the Polyscope plant, where they were ushered into the large office and reception-room, from which they were escorted by guides to the new studio on the top floor of the same building. This glass-covered studio is so enormous that eight independent mo-

tion-picture scenes may be set up and all of them "taken" simultaneously — by separate operators, of course. Here we saw the acting and "taking" of the first scene of the picture-play entitled "The Kiss," which will soon be released to the theaters. The scenery for this was an elaborate outdoor-setting in a garden.

Our visit was made while the sky was overcast and during much of the time a light mist was falling, so in addition to the daylight ten of the largest Cooper Hewitt tubes were used on each side of the "stage" and just outside of the rather narrow angle of view in the picture. Close overhead were fifteen Cooper Hewitt Quartz Lamps, while the foreground got its necessarily stronger illumination from two powerful search-lights placed one on each side of the camera. About a dozen actors and actresses were there in costume "made-up" for the camera's eye and not for our human ones, and so having a very clown-like, bizarre appearance suggesting the circus ring rather than the theater.

From this studio (with several other stage-settings either ready for use, or used and awaiting the demolishing attack of the stage carpenters, who were then busy on a half-finished stage-setting) we were led downstairs, past at least a score of dressing-rooms (quite a number of them in use), on through a very large property-room crowded with cases of new shoes and boots of various unusual types and sizes, long rows of wardrobes containing many styles of modern and ancient uniforms, costumes, gowns, etc. All these things we just caught glimpses of as we were led rapidly through to the smaller studio, where (surrounded by an almost identical Cooper Hewitt arrangement) we found another dozen actors seated at a dining-table about to be "shot" in a comic boarding-house scene. When, after a trifling delay, the "stage manager" gave the signal, there was plenty of noise and action for a little while under the "manager's" shouted directions, and then the call — "That's all."

Immediately after this the actors resumed their places held before the scene started, ready for the "repeat," which is made of each scene to make sure that no film defect, or accident to the film, can spoil the complete record. Rarely, however, the "repeat" is made simultaneously with the original, using a second camera. For example, one cold day last winter six cameras were trained and operated on a man and woman who dived in bathing-costumes into a large outdoor tank filled with floating ice. The "act" couldn't be repeated, as the performers couldn't stand the ordeal twice, so by calling all their operators at this plant and setting them all to work they obtained five "repeats" anyway.

We were then shown the local menagerie (or a part of it, as the lioness, the tiger and some others were in cages in front of which only two or three persons might be taken at the same time), the elephant and her six-months-old baby elephant, the zebra, the East Indian cow, the Russian boar-hounds — one of which was brought out to exercise on the tread-wheel for our enlightenment and to keep it in good health.

After winding our way through a couple of acres of "fronts" of all sorts of buildings, from saloons to palaces, and receiving a souvenir piece of motion-picture film from the barrel and from ultimate destruction in the furnace, we drifted back to the main office-building, just outside of which we were photographed in a group. No, that is not all; before we could move away a motion-picture camera was trained upon us, and while we cheered and waved our hats for the Selig Polyscope Company and for the P. D. A. of A., our enthusiasm was recorded for exhibition in motion-picture theaters all over the continent.

What Lens Shall I Buy ?

THE Bausch & Lomb Optical Co. announces the publication of a new edition of its booklet, "What Lens Shall I Buy ?" which gives the revised prices for 1914. Any one interested to receive a copy will please write to the company, at 622 St. Paul Street, Rochester, N. Y.

Ipsco 1914

A REMARKABLE line of thirty-six cameras, apparently fulfilling every need of the tourist, will be found in the 1914 catalog of Ica cameras. This is the second catalog issued by the International Photo-Sales Corporation and far exceeds the first in typography and arrangement. The illustrations better show the excellences of design and workmanship and the descriptive text is more informative. We note the omission of the Alpha, Ideal Model B, Hollah Models A and C and the Ica Sterolette — instruments hardly needed in such a large and varied line. New additions this year are the Icarette Model C, a $2\frac{1}{4} \times 3\frac{1}{4}$ roll-film camera; the Post-Card Trix, for plates or film-packs; the Jewel, an all-round 5×7 folding camera, and the Tropical, built entirely of teakwood with heavy non-rusting metal and corners and angles of aluminum instead of glue. These instruments all excel in compact arrangement, high quality of material and workmanship and sell at moderate prices considering the fact that they are imported from Germany. In this respect the new tariff has greatly reduced prices in every instance. The splendid line of Ipsco Reflex cameras certainly deserves to become as popular among speed-picture enthusiasts as the Ica film-cameras have among amateurs generally.

High-Speed Pictures by Flashlight

THE Prosch Manufacturing Company has recently placed on the market a simple, unique electric shutter and flash-attachment guaranteed to stop even the rapid motion of whirling dancers. It may be used in connection with the shutter of any folding camera fitted with antinose release and operates with a single dry-battery. Prosch Sunlite cartridges in a pan supported above the camera are fired simultaneously with the opening of the shutter.

For pure magnesium there is a new-style blow-lamp that cannot clog and that holds fully three times as much powder as the old-style lamp of corresponding style.

The Magic Moving Photograph

ONE of the most pleasing photographic novelties that has come to our notice for many years is the magic moving photograph produced with the camera sold by G. Felsenthal & Co., 206 South Jefferson St., Chicago.

Three different poses with varying facial expression are made of a person on *one plate*, a device (lever) at the back of the camera being manipulated after the first and second exposures. This gives unlimited opportunities to produce pictures that are both serious and humorous.

This pleasing and surprising novelty bids fair to become the one great summer-amusement everywhere, for it appeals not only to amateurs, but to professionals who will recognize in it a ready and popular source of pecuniary profit. The manufacturers assure us that ample protection will be given to commercial users of their Life-Motion Photograph Camera. Every one interested should send at once for a sample of these amusing motion-photographs.

Wellington Prospers

THE phenomenal popularity of Wellington plates, films and papers in America is but a reflection of the greater demand for these goods in England where they are made. Word has reached the United States Agents, Ralph Harris & Co., that the works at Elstree, Herts, are being enlarged. Several more factory buildings are now being erected to meet the ever-growing demands from home, colonial and foreign consumers.

That the public may have a better opportunity to see and realize the excellences of their products, Messrs. Wellington & Ward, on February 15, opened an exhibition-gallery at 101 High Holborn, London, W. C., England. It is refined, dignified and harmonious in architecture and decoration and well worth a visit from every American in England. Here may be seen an interesting collection of framed prints and enlargements on various grades of Wellington papers made by leading photographers throughout the world. The gallery is open from 9 to 6.

Assur Colors

A NEW circular which deals with the Assur Coloring-Method has just been issued by Messrs. Schering & Glatz. It comprises the experience of expert Assur artists and has many new and important features. Aside from the modifications of the technique, it contains hints as to the use of Assur Colors on platinum paper, gives more detailed instructions concerning the coloring of portraits and tells how the colors may be reduced without disturbing the uniformity, if they have been applied stronger than finally desired.

Another valuable use to which these colors may be put is the production of effective and absolutely permanent Background Wash-Effects, as well as the working on Photoloid.

The demonstration of the Assur process convinced the photographers, who visited the P. P. A. of Pa. in Scranton last month, that the Assur Colors have no equal. The booth of Schering & Glatz was crowded with interested photographers from early morn'g until the closing hour.

A Camera for All-Round Work

YOUR new camera outfit this spring should be selected with the greatest care. For all-round work the Zeiss-Ensign camera is very efficient. It is a pleasure to have one's spring- and vacation-pictures of a high standard, sharp, clear negatives that truly reproduce the scenes you have taken. Ensign Cameras range in price from \$2.25 upward. The firm of G. Gennert, 24 E. 13th St., New York; 4320 Wabash Ave., Chicago, Ill.; and 682 Mission St., San Francisco, Cal., will be pleased to send an attractive 1914 Ensign Catalog, mailed prepaid, upon request. For film-cameras, a trial of Ensign films will give an agreeable surprise, their speed and orthochromatic quality are exceptional.

The Rietzschel Linear Anastigmat

THIS high-grade eight-lens cemented, symmetrical doublet, manufactured in Munich and imported by the Meyer Camera and Instrument Company, has played no small part in popularizing the Polygon camera, one of the best of the many miniature cameras on the market. As used in Polygon cameras it is fitted to a Compound shutter and at a working-aperture of F/4.5 will give perfect flatness of field, being corrected for astigmatic, spherical and chromatic aberrations.

Photographic Success Spelled with Five Letters



So much depends on the lens that one may fairly say that your very success depends on it.

Take the Dynar for instance. There is no use to deny that its efficiency is far greater than the best rectilinears. In the first place it has double the speed at full aperture, and there is no comparison between the covering-power and definition of the two lenses. Indeed, in order to equal the Dynar in this respect, your rectilinear must be stopped down to F/16, making the Dynar just eight times as efficient. That is about the right ratio. Is it any wonder so many amateurs prefer the Dynar—a high-grade but moderate-priced anastigmat?

Sold in cells that fit all modern shutters.

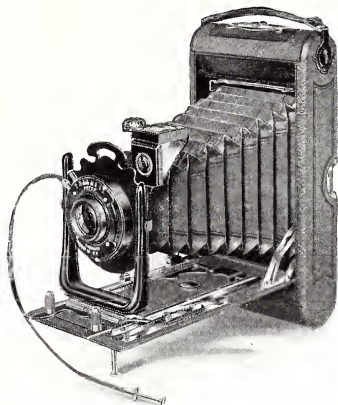
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Will enhance the pleasure of picture-making for you, giving clear sparkling negatives. The Zeiss Triotar permits of picture-making under light-conditions impossible to the ordinary lens. Quite an exceptional outfit when the reasonable price is considered.

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SEND DOLLAR BILL for an exquisite Paget Color-Photograph or \$2.00 for an Autochrome; Portrait or Landscape. Be up to date. Color-Photography has come. E. BLAKE WHITING, New Haven, Conn.

FOR SALE—Owing to nervous trouble my doctor advises a trip abroad. In order to dispose of my studio will make sacrifice. Price only \$1200.00. If sold at once will make you a present of auto and power-boat free of charge, worth \$500.00. HALE'S STUDIO, New London, Conn.

A DAVIS COMPOSING-LENS enables you to see the picture right side up, condensed as it will be on the plate; you get perspective, composition and lighting. A most valuable aid in portraiture or landscape. In leather case, postpaid, \$1.00. Money refunded if not satisfactory. S. A. DAVIS, Springfield, O.

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"DADDY" LIVELY'S SOUTHERN SCHOOL OF PHOTOGRAPHY, at McMinnville, Tenn., open Jan. 1, 1914. Special post-graduate course during February. Write for catalog. Endorsed by PHOTO-ERA as a thoroughly trustworthy institution.

MONEY IN PHOTOGRAPHY. Start at home with your camera. We teach you retouching; portraiture, by mail. Details free. Photographs, demonstrating retouching, 4c. WELLS' STUDIO, East Liverpool, Ohio.

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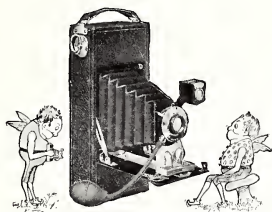
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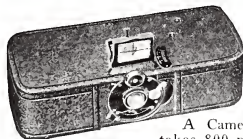
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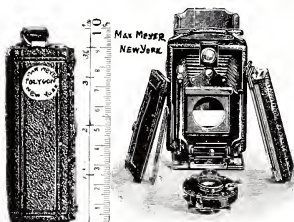
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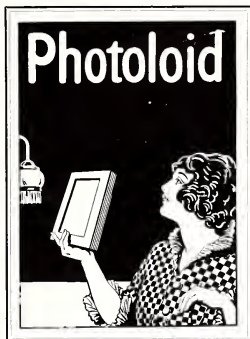
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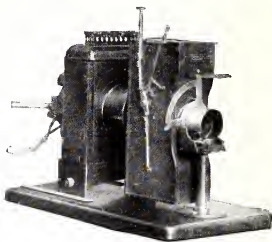
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PHOTO-ERA

The American Journal of Photography

Vol. XXXII

CONTENTS FOR JUNE, 1914

No. 6

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YEARLY SUBSCRIPTION-RATES

United States and Mexico, \$1.50 postpaid. Single copy, 15 cents. | Foreign subscription, \$2.25 postpaid. Single copy, 1 shilling.
Canadian subscription, \$1.85 postpaid. Single copy, 20 cents. | Agents for Great Britain, Houghtons, Ltd., London.

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ILLUSTRATIONS

Concerted Interest	<i>Eugene R. Hutchinson</i>	Cover
Al Fresco Portrait	<i>Eugene R. Hutchinson</i>	266
Home Group-Portrait	<i>Eugene R. Hutchinson</i>	268
Portrait-Study	<i>Eugene R. Hutchinson</i>	269
Modernity	<i>Eugene R. Hutchinson</i>	270
The Sisters	<i>Eugene R. Hutchinson</i>	271
Self-Portrait	<i>Eugene R. Hutchinson</i>	272
The Violinist	<i>Eugene R. Hutchinson</i>	273
The Sky-Line of Pittsburgh	<i>William H. Wolf</i>	274
Home-Interiors	<i>Sherwood Hall, Jr.</i>	275
The Boss of the Porch	<i>Sherwood Hall, Jr.</i>	276
Home-Portrait	<i>W. B. Cline</i>	277
New York	<i>George S. Hoell</i>	278
Another Impression of New York	<i>John Gordon, Jr.</i>	278
Springtime on the Frazer	<i>Norman Lihon</i>	279
La Jeunesse	<i>William Shevell Ellis</i>	281
Flowers	<i>Aurora Studios</i>	284
Cloisters, St. John Lateran	<i>E. E. Soderholtz</i>	285
A Sleepy Pet	<i>H. R. Decker</i>	286
On the Palatine Hill, Rome	<i>G. R. Ballance</i>	287
Fred G. Quimby	<i>W. H. Partridge</i>	288
The Problem	<i>H. A. Storer</i>	290
Mrs. S.	<i>H. A. Storer</i>	291
Pomona	<i>Minna Keene, F.R.P.S.</i>	294
An Arab Head	<i>Helmar Lerski</i>	295
Mother-Love	<i>Rudolph Dührkoop</i>	297
In a Swiss Village — First Prize, Foreign Travel	<i>William H. Kabe</i>	301
On the Viga Canal — Second Prize, Foreign Travel	<i>J. B. Moreau</i>	302
Nelson's Pillar, Dublin — Third Prize, Foreign Travel	<i>Alexander Murray</i>	303
Dutch Girls — Honorable Mention, Foreign Travel	<i>Thomas Carlyle</i>	304
In Munich — Honorable Mention, Foreign Travel	<i>Richard Pertuch</i>	304
On the Raritan — Third Prize, Beginners' Contest	<i>Warren R. Laity</i>	306
Bedtime — First Prize, Beginners' Contest	<i>L. O. Bogart</i>	307
Mottled Now the Icy Track — Second Prize, Beginners' Contest	<i>L. Vinton Richard</i>	308
A Basketful of Mischief — Honorable Mention, Beginners' Contest	<i>W. Stelick</i>	309

ARTICLES

Eugene R. Hutchinson — Professional Pictorialist	<i>Sadakichi Hartmann</i>	267
The Choice and Use of a Miniature Camera — Part III	<i>C. H. Claudy</i>	274
Remarks and Observations on the Practice of Autochrome-Photography	<i>Prof. R. Namias</i>	280
The Ideal Portrait-Negative	<i>David J. Cook</i>	283
A Dry Method to Improve Faulty Negatives	<i>H. A. Storer</i>	289
Etching in Portrait-Photography (Illustrations by the Author)	<i>Clara Weismann</i>	292
My Bonnie Little Lass (A Poem Illustrated by Howard S. Adams)	<i>William Ludlum, Jr.</i>	296



AL FRESCO PORTRAIT
EUGENE R. HUTCHINSON



PHOTO-ERA

The American Journal of Photography

Vol. XXXII

JUNE, 1914

No. 6

Eugene R. Hutchinson — Professional Pictorialist

SADAKICHI HARTMANN

THERE has always been a certain estrangement between pictorialism and straightforward portraiture. Each has its own precise and indisputable characteristics. Many practitioners have tried to combine these two elements, but very few have succeeded. Professional photography can be successful without pictorialism; the same, in a way, may be said of pictorialism. It is really at its best when it avoids portrait-subjects and deals solely with pictorial scenes.

Of course, there are a few noteworthy exceptions in the professional world. It is hardly necessary to mention the names. Among them, E. R. Hutchinson occupies a unique and noteworthy position.

It was about six years ago when I met him for the first time in his Michigan Avenue studio in Chicago. At that time I had never heard of his name and I was unacquainted with his work. The studio which overlooks the lake was an exceedingly small one, and I recognized at once that he was one of those photographers who attended to all the details of his craft in person. His prints struck me as being highly artistic, but hardly practical, in the ordinary sense of the word. He seemed to strive too much for odd or, at least, peculiar and picturesque effects, for tone, atmosphere and space-arrangement; and yet I realized at once — and this was long before his work created a sensation at one of the National Conventions — that I was talking to a man of exceptional photographic gifts. I knew nothing of his antecedents, where he had been apprenticed or how he had managed to master the intricacies of his vocation (facts like these generally do not interest me), but I realized that he had acquired not only the necessary knowledge as a technician, but that of an artist — by this I mean that he had the pictorial vision of a painter. And so, even at that early date, I entertained, no doubt, the belief that he would make his way to the very top of the ladder.

Since then Hutchinson has fully carried out my anticipation of his talent. Looking at the illustrations that accompany this appreciation, I am certain that my readers will agree with me that his work is exceptional in finish as well as in conception. What I find most praiseworthy in these prints is that they represent a departure from the commonplace that we are used to seeing in the work of most professional photographers. So many of the latter have a distinct or rather stereotyped style that they strictly adhere to. This can hardly be claimed for Hutchinson's work. It has the merit of showing an astonishing variety of method, yet there is a certain refinement and naturalness of pose about it, a certain something which cannot be easily defined in words, that makes it possible to pick out a Hutchinson print from hundreds of others at the first glance. Hutchinson is not merely an expert in composition; he actually thinks out his space-arrangements and adapts them to the subject or character of his sitter. This is very noticeable in the portrait of the lady in the tango pose, with that "impossible" peplum skirt. It represents a modern innovation in dress and, at the same time, a very popular phase of cotemporary society-life; so he accentuated pose and gown, not only by making the figure white against a dark background, but by making the figure occupy a very small ratio of the picture-area. The figure is beautiful in detail and gracefully posed, and all the photographer needed to fill the monotony of the space, besides the figure itself, was a black belt, the shimmer on the woodwork, the shadow and a certain "vibration" in the background.

In the portrait of the violinist we encounter an entirely different proposition. The hand holding the bow is an original device, although it is open to the criticism that it does not show the profession of the sitter plainly enough. It would be more explanatory if more of the violin were seen. But, of course, it is merely a matter of conception whether the delineation of a



HOME GROUP-PORTRAIT

EUGENE R. HUTCHINSON

musician's personality is improved by the introduction of the particular instrument that he plays. As far as composition is concerned, the picture is excellent. The head and hands perfectly balance each other and the strong accents of black in the tie, in the mustache and hair form a delicious contrast to the white of the collar. The silhouette of the head and bust would have been interesting enough without the shadow, but the latter materially helps to make the background more interesting. The outlines, particularly of the hands, the collar and the bow, show that peculiar diffusion which is, perhaps, the leading characteristic of Hutchinson's work. Some critics have asked him whether he gave his camera a kick whenever he made an exposure, but I suppose it is merely the matter of a soft-focus lens. It is surely very effective.

Outlines in photographic interpretation, although depending entirely on gradations of tones, are frequently harsh. The Hutchinson method makes them wonderfully soft, as if they were melting into each other and into the background, although the slight vibration caused by the overlapping—one might say of imperfect register—may not be pleasant to the eyes of some beholders.

This is very noticeable in the three-quarter-length profile-portrait of the young girl with a black hat and white fichu. It looks almost as if a certain soft line had been drawn along the outline or along the contour of the profile. This is what the French painters call to "envelop" an object. I have seen Beach, of Buffalo, practise the same thing; but with him it was more a scientific experiment which he had



PORTRAIT-STUDY
EUGENE R. HUTCHINSON





MODERNITY
EUGENE R. HUTCHINSON





THE SISTERS

EUGENE R. HUTCHINSON

learned from a Canadian painter who at that time was residing in the town. The extended or repeated outline into space is quite a problem of modern art. Cézanne put it into practice and it has gone even as far as Cubism and Futurism. Hutchinson, however, utilizes this idea in a very moderate way, and surely succeeds to soften the outline whenever he wishes to do so. The charm of his method is that he applies it only in certain parts. There is no double outline noticeable in the figure of the young girl except in the face, the hat and the white fichu. By that he shows great discrimination and surely gains his purpose of softening lines that seem to be uppermost in his mind.

In some of his other pictures, as in his portraits of husband and wife and the two sisters, the diffusions do not occur so much in the face

as in the visible parts of the body. This, again, proves that Hutchinson knows what he wants to express. It is not accident or an haphazard affair with him. He desires a certain effect and knows how to get it.

The two pictures also show that he can compose equally well in a dark or light tonality. Both show excellent grouping and a judicious contrast of dark accents and white or middle-tint planes. As far as composition goes, these pictures seem to have been influenced by the German schools; but this may be a mistake. Nevertheless they impress us as being a trifle over-sentimental. This seems to be largely a matter of pose, if not of a certain intensity of facial expression. It seems as if they were looking very hard at some object, and this with the peculiar lighting — of rather intense and



SELF-PORTRAIT

EUGENE R. HUTCHINSON

well-defined highlights — make them look as if the lighting, wherever it may come from, were the cause of the earnest and severe gaze.

The light-effects, judged as light-effects, are remarkable for their purity and luminosity. In the portrait of the child with a big hat, one almost feels the sunlight. To produce such clean and strong lights, and yet keep the shadowy part of the composition in a light key, impresses me as being quite a technical feat. The ordinary snapshot often yields these peculiar boundary-lines between lights and shadows. The latter, of course, are invariably crude; they distort the features, but in Hutchinson's pictures they help the modeling and throw the face into finer relief.

Hutchinson works on the principles of the home-portraitists, even when he takes pictures

in the studio. He utilizes natural interior-backgrounds with great skill whenever he has the opportunity, as we can notice in his portrait of a mother and two children, as well as in that of the child with the big hat. Unlike other professionals, however, he is careful to use as few accessories as possible, and, no doubt, he has a preference for the plain background. His backgrounds are just backgrounds, and no more, whether white, dark, in middle-tint, vibrant with shadows or showing the furniture of an interior.

Hutchinson, as we know him to-day, is one of the successful pioneers that have amalgamated pictorialism with portraiture. His compositions are novel and exceptional, but they are not grotesque or far-fetched like those of some of the most advanced pictorial practitioners.



THE VIOLINIST

EUGENE R. HUTCHINSON

Every camera-craftsman can make a comparatively interesting picture of celebrity, of a beautiful child or woman, or of some interesting type; but Hutchinson has the facility to imbue every sitter, even those in the most ordinary walks of life, with picture-making elements that enhance the delineation artistically and, at the same time, satisfy the customer. He seems to possess rare accomplishments outside the ordinary domain of professionals. He is a character-reader and with every new subject he studies the face, form and peculiar characteristics of deportment of the particular personality that he is confronted with. His knowledge of life and art is such that he can at once use his imagination and apply his knowledge of light and grouping, of contrast and space-arrangement in such a way that he will get the most

characteristic qualities and, furthermore, transfer them into an artistic atmosphere.

If a man's faculties come easily and naturally to him, he has arrived at the point where the professional photographer ought to be. The only danger, then, is that he will not *repeat* his successes, but that he will continue to search, to experiment, to test each new case; that he will not discontinue his studies of art and human expression, but that he will use every sitter for a new experiment on his way to perfect photographic expression. I believe that Eugene R. Hutchinson, of Chicago, is one of these men.



Do the work you are fitted to do. If you are a pumpkin-vine, do not try to become a morning-glory. — *Claude L. Powers.*



THE SKY-LINE OF PITTSBURGH (VEST-POCKET TENAX)



WILLIAM H. WOLF

The Choice and Use of a Miniature Camera

Part III

C. H. CLAUDY

IT may seem that the cart precedes the horse in this series of papers, that the choice of a miniature camera has been discussed first, and the advantages of such instruments over bulkier ones, last. Yet it seemed more logical, in view of the wide market which such miniature instruments enjoy, to survey the field of choice first, if only to interest the photographer who has hitherto looked upon such miniature instruments as toys. No one who has had the opportunity to examine any of the instruments previously described but must have been impressed with the fact that these cameras are not little because they are toys or because inexpensive; on the contrary, their very minuteness, in most cases, requires a higher order of workmanship than a larger instrument demands, and thus, instead of being less, are often more expensive than their larger brethren.

He who has never used a miniature camera, then, must be convinced that if such cameras are sold, it must be because of certain well-recognized advantages which such types of instruments possess. The obvious advantages can be learned from any salesman. Miniature cameras are easily portable. They are small. They fit into the pocket. They are light in weight. Material for them is inexpensive. They are easily handled.

But there is more behind. The enthusiasm of him who has an attack of photographic fever is sufficient to make him forget weight and

bulk, and the prosperity of the photographic industry proves that the matter of lack of expense of upkeep is not a very large factor in the purchase of supplies by the average camera-user. So if we are intelligently to answer the question, "Why a small camera?" we must turn from the obvious advantages to those concealed in the nature of the instrument—the photographic advantages which such instruments provide.

In the first place, then, the small camera uses a lens of short focus. Larger cameras using short-focus lenses give an undesirable perspective because including too wide an angle of view. To get the advantages of the short-focus lens without its disadvantages, one must be satisfied with a small negative, in proportion to the focus of the lens. The short-focus lens' advantages are many, but three stand out preeminently among them. They are: depth of focus with large openings, little need of much, if any, focusing, and the slowness of movement of the images they form.

Depth of focus—size of lens-aperture being the same—is strictly proportional to focal length. The less the focal length, the greater the depth of focus. The relation is not in proportion, but inversely as the square of the focus. Thus, a three-inch lens has four times the depth of focus of a six-inch lens.

The greater the depth of focus, the less need for altering the distance of lens to plate, and the greater the chances of success if—in the



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SHERWOOD HALL, JR.
VEST-POCKET TENAX

case of scale-focusing instruments — the distance has been wrongly guessed. While most miniature cameras are provided with a means for focusing, it will be noticed that the distance at which the lens possesses infinity of focus is much less than with longer-focus lenses, and a trial of such instruments, focused at fifteen to twenty-five feet, will show that at any but extremely-large apertures, practically everything wanted in any landscape-view is always in focus.

These first two advantages of the short-focus lens on a miniature camera are seen at their best in interior-work. In the home, where many of the rooms are smaller than one might wish, a larger camera with a longer-focus lens must ordinarily be pushed back into one corner as far as possible, and even then the picture often does not include enough. It is unsatisfactory at best, inconvenient and uncertain. A miniature camera may be operated in the same spot in perfect comfort; moreover, the usual space-taking tripod may usually be dispensed with in favor of the back of a chair, top of a cabinet, mantel or other shelf. The nearest

and most distant objects are easily brought into uniform focus, and sufficiently sharp definition may be had at large lens-aperture, thereby greatly reducing the necessary exposure. These potent advantages of short focal length are made the most of in such a manner that its chief disadvantage — distortion when used on a larger camera — is entirely avoided.

The shorter the focus of any lens, the smaller the image, and the slower that image moves. From the same viewpoint the image formed with a three-inch lens is three times smaller than that formed with a nine-inch lens. If the image is of a moving object, the smaller image moves three times less rapidly than that formed with the nine-inch lens. The exposure, then, for the smaller image, can be three times as long as that required by the nine-inch lens, with exactly the same result as regards "stopping" motion. This works out to the advantage of the photographer in two ways. With his small camera

he can make pictures of objects going three times as fast as the fastest, which can be "stopped" by the same shutter on the larger camera, or he can take snap-shots in lights three times less strong



than will be required by the larger instrument. The miniature camera, then, adds to the length of the snapshot day, and triples the effectiveness of its shutter-speeds over a camera with a nine-inch lens — no inconsiderable advantages, these.

As a general rule, the accuracy of the small shutter is greater than that of the larger. It might seem that the small parts and fine work needed in a small shutter would tend to make the opposite the case, but it is not so. The comparison between a huge church-tower clock and a fine watch may be made here, the watch, of course, representing the greater degree of accuracy of mechanism. The reason that the smaller shutters are more accurate than their larger brothers comes, undoubtedly, from the lesser friction, the absence of weight and inertia in moving-parts, and the tendency of small springs to act in a more uniform manner than larger ones.

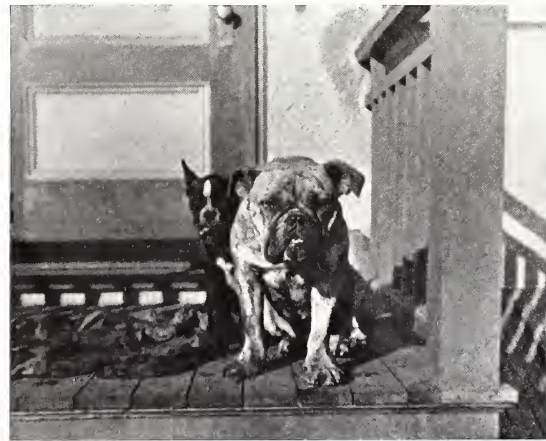
In using a miniature camera, many advantages over large instruments become apparent. It is easier to hold a small camera steady than it is a larger one. As the image-motion is slower, the necessity for absolute stillness is correspondingly less. It is far simpler to hold a small camera at arms' length or over one's head and make an exposure, than it is to do the same thing with a camera which really requires two hands for proper manipulation. The

"secret picture," which is so dear to the hearts of many photographers, is far easier made with the little camera than the larger one, not only because its small bulk is the easier concealed, but because of the shape and odd appearance of many of them, which give no clue as to just which end is the lens-end, save on close inspection.

The objection of many to the small camera, that "the pictures are so tiny," is met immediately by the ease of the process of enlarging. And he who counters again with, "Oh, well, if I've got to enlarge, I might as well do it from a part of a larger negative as from the whole of a tiny one," may be surprised to hear that the small negative, made with a short-focus lens, comes closer to the ideal negative for enlarging than any he will be likely to make with a larger instrument.

What is the ideal negative to use for enlarging?

Photographically, it is one which is "snappy" — this much-abused word here meaning bright, clear, with plenty of contrast, clear shadows and thin highlights, both full of detail; highlights which are in no case blocked up, but equally in no case thin and gray. Technically, the ideal negative for enlarging is one of infinite depth and complete sharpness. Enlarging actually enlarges the defects of a negative only as much as it enlarges the perfections. But, ap-



THE BOSS OF THE PORCH (V. P. TENAX ENLARGEMENT)
SHERWOOD HALL, JR.

parently, enlarging magnifies the defects of a negative far more than its perfections. This is because many defects are passed over by the eye when they are minute, but are seized upon and looked at with displeasure when they become larger. Thus, we are accustomed to admit a movement of from one-fiftieth of an inch to one-hundredth of an inch or less in our snapshots, and to disregard it. Viewed at the conventional eye-distance of ten inches, such minute movement, showing in a print, is not distressing or even visible. Triple the size of the print, however, and the fiftieth of an inch of movement becomes almost a sixteenth

of an inch in size — and such an amount is not to be tolerated in any picture which is to be called sharp. The same principle applies to softness of focus in background or foreground. What is admissible in the contact-print often becomes distressing in the enlargement. Hence, that negative which is technically most perfect — has the greatest degree of sharpness, greatest depth of focus, least movement — is closest to the ideal negative for enlarging, “snappiness” or proper photographic quality being understood.

The small camera with its short-focus lens produces negatives of this character. “Snappiness” in any negative has nothing to do with size or focal length — it is a result of proper adjustment of exposure to light-conditions, character of subject, and proper development. But infinite depth, and lack of movement in the image, can be obtained more often, more easily and more surely with the small camera than with the large one.

It must also be noted that the kind of negative least desirable for enlarging-purposes is that one which has an undue amount of contrast — the result of underexposure and forced development. The negative most commonly underexposed is the snapshot, for two reasons. One is the tendency of any camera-user to fear movement on the film, and therefore his tendency to make the exposure unduly fast rather than unduly slow. The other is lack of attention to light-conditions, and the attempt to make quick exposures required by the speed of the object, in lights all inadequate to the formation of a sufficiently brilliant image fully to expose the plate in the time of the fast snapshot.

The little camera provides the user with a remedy for both these conditions. Having a capacity for stopping motion from two to three times greater than the large camera, with the same exposure, allowance can be made for poor light-conditions without likelihood of blurring the image. A few experiments, also, will convince the user of the pocket-instrument that he need have much less fear of motion in his negative than when using a larger instrument. On both counts, then, the small camera is better able to produce negatives suitable for enlarging than is the larger instrument.

The question is often asked, “If one of the advantages of the small camera is the small cost of upkeep, is not this advantage more than offset by the increased price of that printing which is always enlarging?”

Let us assume that the price of a $1\frac{1}{2} \times 2\frac{1}{2}$ negative, developed, is three cents, and the price of a $3\frac{1}{4} \times 5\frac{1}{2}$ inch negative, developed, is



HOME-PORTRAIT (V. P. KODAK)

W. B. CLINE

seven and a half cents (which is allowing one-half cent for development of each film). The price of $3\frac{1}{4} \times 5\frac{1}{2}$ inch paper for printing is exactly the same whether you use a D. O. P. for contact-printing or a bromide for enlarging. It is obvious, then, that the same size prints from the miniature and the postcard-camera cost four and a half cents less when made by the enlarging-process than when printed by contact from the larger negative. That this is contrary to common belief is easily understood. To the unthinking, “enlargement” means a print at least 8×10 inches in size. If all miniature camera negatives had to be enlarged to 8×10 , while the user of the postcard-camera was content with contact prints, of course the small camera would be the most expensive to maintain.

Apparatus for enlarging is easily constructed at home, if it is to be used with the miniature camera negatives. For such small surfaces, an enlarging-lantern and its expensive condensor are entirely unnecessary. Printing-boxes can be obtained for a small sum, in which the negative



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is placed at one end and paper at the other, and enlarged prints made by pointing at a gas-jet or electric light or daylight—enlarged prints which show no unevenness of illumination and which often possess a quality and an atmosphere which is totally lacking in contact-prints.

It is not desired to emphasize too loudly the matter of expense of upkeep. The enthusiast usually takes what he wants when he wants it, regardless of the stock-house bill at the end of the month. There are times, however, when some limit must be put upon expenditure of film or plate, paper and darkroom-supplies. On vacation and when traveling, the tendency is often to picture everything while the opportunity is present, and wait for more leisurely inspection to determine which is worth while to preserve in the form of the print. After one such orgy of exposure, however, the photographer who has exposed twenty rolls of film and produced only twenty negatives he really wants, is very likely to start out next time with a severe mental limitation as to the amount of film he will use. As a result, he errs on the side of caution and fails to take much of what he sees on his travels which later he would like to have.

In this little matter the little camera is a real help. With films selling for twenty cents per roll of eight exposures, there is the less

need of economy, and one can snapshoot away without feeling that one's bank account is being ruined. Then, when rough proofs are made of many small negatives, leisurely choice can be made of what will be preserved in enlarged form, and in spite of prodigality in exposures it will probably be found that money has been saved in the end, without cutting down the joy of exposing on anything and everything on trip or vacation which appeals.

With all these various points of advantage of the small camera in mind, it seems there is little room for argument—that a miniature camera is necessarily an integral part of any photographic outfit. But nothing in these stories should be construed as stating that the small camera is better than the large camera for all work, or that the small instrument can ever entirely replace the larger one. Both have their own fields, and each is supreme in its own. If the small camera encroaches on the field of the larger, and by its obvious physical advantages supersedes a larger instrument in the affections of the user, it will, after all, be only one more indication of the trend of modern thought, photographic as well as economic, that work is done best when it is done with least effort and with least physical obstruction to the attainment of an ideal.



SPRINGTIME ON THE FRAZER

NORMAN LIHON

Remarks and Observations on the Practice of Autochrome-Photography

PROF. R. NAMIAS

THE usual cause of the occasional lack of brilliance in the colors of Autochrome pictures is overexposure and overdevelopment. In order to get a clear idea of the reasons for this, one should study carefully a green landscape. Those who have had experience with the Autochrome process know that the greens do not always come out as brilliant as they appear to the eye and that close observation is necessary to learn all the usual as well as the less-known causes that affect these colors in reproduction.

In order to have the greens appear in their natural brilliance, both the green and the violet granules in the color-filter must be covered to a large extent and the red granules almost entirely shut out. As natural greens, particularly when brightly lighted, reflect far more white than green light, if the Autochrome plate is overexposed, the white rays are quite active and bring all of the colored granules into play, which renders the green extremely thin and pale. There are doubtless more of the green granules in evidence than of the other colors, but the proportion is too small. Hence it is only with approximately correct exposure that greens can be reproduced properly. These remarks about green hold good for all natural colors, though in a lesser degree, inasmuch as all colors, even when they appear full and unmixed, reflect more or less white light; and while with correct exposure its effect is not noticeable, with overexposure it becomes injurious and produces bleaching of the colors.

It should be borne in mind that the impression on the eye is instantaneous, whereas that on the sensitive coating of the plate is appreciably longer. If, for instance, one looks steadily at a red poppy, the flower always appears red, even though there is a certain quantity of white light present which is reflected from the flower. But the Autochrome plate, which in the first instant receives the predominating red rays, will, if given a lengthy exposure, be subject to an ever-increasing impression from the white rays, and the moment may arrive when their effect will overcome the red and the poppy will be reproduced in such pale tones that it will appear almost white.

It is clear that, when the correct exposure of an Autochrome plate is exceeded, the error can-

not be corrected by any rational method of developing. In this there is a vast difference between the Autochrome and an ordinary plate. With the latter the best remedy against overexposure is to reduce the time of development. The factorial method, which has become so popular at the present time, is particularly calculated to equalize errors of exposure. But in developing Autochrome plates there can be only a very limited reduction of the time, otherwise the truth of the colors, and particularly their clearness, are likely to be seriously affected. Indeed, it must be kept in mind that beyond a certain limit the shortening of the time of development results in the covering of all the granules of the color-filter, for in no place can the developer penetrate the whole thickness of the sensitive film. This will cause general fogging of the plate and the color-granules will not be clear or nearly clear, but all will be more or less covered and the picture will be lacking in contrast and life.

With an ordinary negative, general fog can usually be got rid of by treating with Farmer's reducer, which can be followed by redevelopment to restore the necessary strength. With an Autochrome, however, such treatment is not possible, because its silver content is so small that it would require a reducer capable of taking with mathematical precision an infinitesimal thickness of silver from the entire surface of the plate. I have never succeeded in clearing a foggy Autochrome so that, after strengthening, it would show a good picture. A little silver is always removed with the fog—silver which should remain for covering the granules of the color-filter. The picture will, indeed, be a little more transparent; but in general it will be no better than before.

The case is different when it is a question of strengthening a weak but clear Autochrome, for in this case one may be sure to lose nothing and the strengthening may be regulated with almost mathematical exactness. The method which I prefer is the following: first, treating with mercuric bichloride; second, treating with a weak, fresh solution of sodium sulphite, not stronger than five per cent. If this does not intensify sufficiently, the plate can be placed in a diluted ordinary developer and exposed to full daylight until the desired intensity is



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obtained. The weak sulphite solution reduces the mercuric chloride, but has no effect on the silver chloride, which may be reduced to the desired degree by subsequent development.

We will now return to the developing. It is well known that in common photography the addition of a solution of potassium bromide — or, still better, of bromide and boric acid — to a developer is an effective means of correcting overexposure. But when the attempt is made to correct errors in exposure of Autochrome plates by this means the result is entirely different. The object of this addition of potassium bromide and boric acid to the developer is to bring out the weak parts and to restrain the highlights. But with an Autochrome plate (except in excessive overexposure, in which case improvement cannot be expected) overexposure has not the same effect upon the different colors of an object. Hence, if the developer be modified by the addition mentioned for the purpose of strengthening the contrasts of the picture, the correct reproduction of the colors is affected because the development of the feeble light-impressions, which are necessary for the harmony of the whole, is made more difficult. Therefore, the use of a modified developer which would cause a falsification of the colors cannot be recommended.

All that we have here said shows clearly that the correct determination of the time of exposure of Autochrome plates has an appreciable influence on the perfection of the result obtained, because it is not possible, as with ordinary plates, to correct errors in exposure without compromising more or less the clearness and color-truth of the picture. At the same time it is not to be understood that the leeway for exposure is excessively limited, since variations of 1 to 2 are readily tolerated, and it is always better to give abundant exposure than not. The use of a good photometer is advisable; but when this is not at hand, the following may be considered a reliable guide, since I have found it usually to be entirely adequate: with a lens of $F/4.5$ (which for a hand-camera is a sufficient practical opening), in bright sunshine in spring or summer, an exposure of half a second will usually be found correct.

A further observation may be made regarding the subject to be taken on an Autochrome

plate — an observation whose correctness has been verified by long practice: when taking color-views of distant objects a clear, diffused light is always better than direct sunshine. If there is a considerable amount of atmosphere between the lens and the object, there will naturally be a weakening of the colors. The colored rays from a distant object must penetrate a large mass of air which absorbs a portion of the colors and affects their action. From the air itself particularly, as well as from the moisture and dust-particles floating in it, there is a considerable radiation of white light which has great influence in further weakening the unabsorbed color-rays. But the influence of these radiations is vastly increased when the atmosphere is illuminated by bright sunlight. In such cases, owing to the thinning of all the colors of distant objects by the radiation of white light, the result is generally a hazy picture without life or contrast. In high mountains, because of the thinner atmosphere and the diminished radiation, the weakening-effect of the latter is far less sensible. For this reason it is advisable, in order to get good results in Autochrome telephotography, to photograph the subjects when there is a strong diffused light, but no direct sunlight.

If, on the other hand, relatively near-by objects are to be photographed, the atmospheric effect, even in bright sunshine, is unimportant. If there is abundance of green, it is well to employ other expedients, such as avoiding full sunlight on foliage or green fields. As has already been stated, intensely green leaves always reflect a large amount of white light; but if they receive the full rays of the sun, the quantity is immensely greater, causing in the Autochrome a general bleaching of the green. Green objects reflect only a small proportion of their natural color (never more than one-third). If, therefore, it is desired to reproduce the foliage in a landscape with the greatest possible brilliance, every means should be used to ensure the colors reaching the plate with the least possible thinning by white light.

Finally, I would suggest that, in photographing landscapes in which bright colors are not prominent, the compensating-filter furnished by Messrs. Lumière be replaced by one containing less red.—*Eder's Jahrbuch.*

THE power of a man increases steadily by continuance in one direction. He becomes acquainted with the resistances and with his own tools; increases his skill and strength and learns the favorable moments and favorable accidents. He is his own apprentice, and more time gives a great addition of power, just as a falling body acquires momentum with every foot of the fall. — *Emerson.*

The Ideal Portrait-Negative

DAVID J. COOK

THE idealization of the real in portraiture is what is sought by every earnest worker. This is our dream, and when one has attained the goal, what impetus it gives to the work and what an inspiration to labor! Ruskin says, "Any work of art which represents the mental conception of a material object is in the primary sense of the word ideal;" and reference here to the ideal portrait-negative means a negative which exceeds ordinary reality, freed of commonplaceness or grossness.

Some worker in the early days of photography, evidently one who was high up in the practice of the art-science, is authority for the statement that "A poor print, in the nature of things, is a just sequence to a poor negative." It behooves us, then, in laying the foundation of a successful print, to get it in the negative. In other words, we must have our ideal negative to start with before we can expect our clients to be pleased with the finished picture.

A proper consideration of the negative, then, is of first importance and should embrace: first — the proper plate for the high-class portrait; second — lighting the subject; third — timing or exposure; fourth — development; fifth — after-treatment, if by any chance the photographer has erred in any of the above-mentioned stages of the work, *i.e.*, by accident; the use of the wrong plate; bad judgment in lighting or in timing or in chemical manipulation.

The proper plate for the high-class portrait is that plate which is the acme of the dryplate maker's art. Nothing less will do, as the master-photographer has learned from trying and costly experiences. The art-science of photography requires exact and scientifically-prepared media. Photography is that art of producing pictures of objects by the action of light on chemically-prepared surfaces; and the term *photography*, taken from the Greek words *phos* (light) and *grapho* (to write), practically means to write in light; hence a plate that will allow the greatest latitude in color-tonal values and gradations from the highest light to the deepest shadow — sensitive to a high degree, permitting a very brief exposure — will be the most desirable. Theoretically, the color-sensitive, non-halation dryplate is the plate *par excellence*. The dryplate-manufacturer's standard, however, may not always be that of the photographer; but

he is safe to choose any of the standard makes of plates listed in the PHOTO-ERA Exposure-Guide in Classes 1¼, 1, ¾ or ½. Personally, the writer prefers those listed in Class 1¼, although in strict justice to those photographers, the nature of whose work demands an ultra-rapid plate with maximum latitude for harmonious gradation, it must be said of Class ½ — which includes the new portrait-films — that they are in a class by themselves. Certainly, if the artist-photographer cannot get ideal portrait-negatives with these, it is not because of any fault in the plates, but rather of a lack of a proper appreciation of such sensitive material.

The most notable qualities desired in a dryplate are as follows: freedom of halation; rendering white draperies as such and equalizing sharp contrasts of blacks and whites; sensitive to color, producing flesh-tonal color-values and textures perfectly; fine grain, showing detail even in the very deepest shadows; to be easily retouched; possessing great latitude; uniformity in both quality and in speed; not to be readily frilled; assured keeping-qualities; richness in the sensitive salts of silver; adapted equally well to cold and warm climates; in speed, just right — quick enough to catch the passing expression, even on dark days, and allowing forced chemical manipulation to the required degree of softness or brilliancy; freedom of veil or fog — clear, clean and full of snap, possessing those qualities which print quickly and give to the picture roundness and delicacy whether printed in gum, carbon, platinotype, P. O. P. or the many varieties of gaslight developing-papers. Briefly — the best advice one can give regarding the selection of a suitable dryplate is to choose a plate that will allow the best results with the least amount of manipulation, and then continue its use long enough to learn fully its peculiarities, then stick to it; for it is only by working along the lines of least resistance that one can produce pictures with ease and certainty.

The lighting of the human head has taxed the skill of our best portraitists, whether painter, etcher or photographer, and it is doubtful whether we can improve the scheme and arrangement adopted by such master-painters as Rembrandt, Van Rijn, Sir Joshua Reynolds, Sir Thomas Lawrence or Thomas Gainsborough, the principles of which are so clearly explained in that admirable little booklet, "Artistic Lighting," by the late James Inglis. It would



FLOWERS

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be futile to attempt a full explanation of these principles in this brief article without diagrams or illustrations, and it must suffice to say that the light should fall on the subject at an angle nearly that of 45 degrees from the front, side and top, if perfect roundness, form and perspective be the greatest desideratum. The highlights on the face should fall on the forehead, just over the eye on the light side of the face; a fine bright line of light should run very nearly the full length of the nose, and broken only by the irregular form of that feature. Just a touch of light should fall on the lower lip and the chin, and should illuminate fully all that side of the head which faces the light, except that part from the cheek-bone towards the back part of the head. The eye on the shadow side of the head also should be illuminated fully, even in the extreme corner, where it joins the root of the nose; likewise the forepart of the cheek on the shadow side of the head should be illuminated, forming a V-shaped patch of light the base of which is the eye, and the lower part

of which extends around the corner of the mouth and joins the chin. The catch-lights should be found in both eyes, just inside the iris, touching the pupil on the side and top of the eyes nearest to the source of the light. The principal shadow is that cast by the nose, and, if correctly placed, the point of this shadow and the top of the ear, on the light side of the face, if joined by an imaginary line extending across the face and connecting the two, would fall at an angle of 45 degrees.

With regard to timing or exposure, the old rule of timing for the shadows is a good one, but may be modified to read, expose for those parts of the picture and those parts only which are to be defined clearly and distinctly. Exposure should be in harmony with the scale of light-intensities, favoring that element of the picture that is of chief importance. If a plate be underexposed, the highlights in the print are rendered whiter and the shadows darker. Overexposure, on the contrary, tends to destroy the contrasts of blacks and whites. Overexposure



CLOISTERS, ST. JOHN LATERAN

E. E. SODERHOLTZ

tends to tone down the highlights in the print rather than to render them whiter. It is over-development rather than causes this fault, although chalkiness of the whites is generally laid to overexposure. Exposure renders a certain quantity of the silver haloids reducible to the metallic state — the effect of which is definite, and it is futile to attempt — by any variation of formula or kind of developing-agent — to obtain some quality that was not placed there by the action of the light.

The subject of development is a vital one. It may be said to be a continuation of the action of the light, increasing the number and extent of reduction of the altered silver particles (reduction product), thus rendering the latent image visible; and any developing-agent which will accomplish this result, producing an image free of veil or fog, and yielding the desired density and consequent contrast, in a reasonable time, is a good developer. Pyro or pyrogallol acid (pyrogallol) is undoubtedly the best developer by reason of its great latitude. It is a

peculiarity of pyro that it is either a soft-working developer — allowing all lower tones and detail to appear early in the course of development, opacity following slowly — or a hard-working one, allowing the highlights to gain opacity rapidly and developing shadow-detail slowly, according as it contains a greater or less number of grains of pyro to the ounce of developing-solution. The proper balance will allow the image to come up normally, opacity and detail following gradually until printing-opacity (printing-contrast) is reached. The best formula is that which is recommended by the manufacturer of the dryplates that are used. No one knows better than the manufacturer what is best suited to his particular emulsion, and if photographers would cease to "tinker" their solutions, more nearly ideal negatives would be made; therefore, while almost any well-balanced developing-solution will develop an exposed plate, no formula can be given that will develop all makes of plates equally well. Given a well-balanced developing-solution for



A SLEEPY PET

H. R. DECKER

any particular plate, the whole secret lies in removing the negative from the solution when it has acquired suitable printing-density or contrast. Underdevelopment destroys contrast by failure to bring out the lower tones and build up sufficient opacity to print with the desired degree or degrees of contrast. Overdevelopment of the image destroys the delicate gradations between halftones and highlights and produces chalky whites in the print. The negative is too harsh and opaque all over. Development fixes the limit of contrast and comes to an end when the silver haloids (silver sub-salts) that have been affected by the action of light during exposure, have all been reduced to the metallic state. Development of imagery cannot extend beyond the limit of light-action; therefore, exposure should be sufficient to give the desired printing-contrast (contrast sufficient to print with the

desired strength) by a partial development (development not carried to the limit of the action of the light).

To achieve the ideal portrait-negative, the scale of tones or contrasts of lights and shades upon the subject should be right to begin with. Exposure should be in harmony with the scale of light-intensities or tonal qualities. Development should be automatic or nearly so, preserving the detail, modeling, perspective and perfect tonal qualities, which, by a suitable printing-process, will express best the character and individuality, as one sees them, of the subject photographed. Stripped of all cant, our ideal negative is, or should be, an actual photograph of the subject in a reversed form. Negative-making, however, confronts one with so many necessities to be provided for, that no matter whether the worker be novice or expert, he must



ON THE PALATINE HILL, ROME

G. R. BALLANCE

devise ways and modify methods to make means fit his ends; hence, more or less after-treatment of the negative is necessary. However, should the negative print with too much contrast, the lighting of the subject may have been too contrasted, or the development of the highlights unduly prolonged, or too strong a developing-solution used — one that developed contrast more rapidly than detail, or an unsuitable printing-paper was used. The printing-process for this class of negative may be varied, using one with a long scale of tones — a soft-working paper — or the opacity of the highlights lessened by reducing with ammonium persulphate. Should the negative print quickly, without sufficient roundness and strength, it was underdeveloped, and should, in this case, be intensified with mercury bichloride. Should the negative print slowly with full detail in the deepest shadows, but without sufficient roundness and gradations, the lighting of the subject may have been too flat, or the plate overexposed and overdeveloped, or an unsuitable printing-paper used. The printing-process for this class of negative should be varied, using one of a

short scale of tones, or the opacity of the negative lessened throughout, using the potassium ferricyanide reducer. Should the negative print quickly and flat, lacking roundness and vigor, but full of detail, the negative was developed in too weak a solution — one that developed detail more rapidly than contrast, and the negative should be intensified. Whatever the fault, the operator should endeavor to determine the probable cause, as only through intelligent diagnosis of the failure is the worker qualified to set about to obtain that which is most desired in the finished print. A negative is made up of varying degrees of contrasts of lights and shades (opacities and transparencies), and the degrees of opacity depend upon, and are in exact proportion to, what the light and developer, acting unitedly, have made them. A negative is good or bad just in proportion to its capacity to yield desirable prints, and in considering it strict attention should be paid to the practical use to which it is to be put, *i.e.*, the making of prints; and the highest success is to be realized in the accomplishment of a pictorial photograph.



FRED G. QUIMBY
BY W. H. PARTRIDGE



A Dry Method to Improve Faulty Negatives

H. A. STORER

THIS article has to do chiefly with negatives made in the varying lightings that are encountered in home-photography. The characteristic negative of this kind, if it has been developed far enough to yield a brilliant print, is often a little over-dense in the highlights and too thin in the shadows, many of its strong points being too prominent in their relative importance to the composition. Still, we often hesitate to disturb a negative, fearing the uncertainties of chemical manipulations, nor can we conscientiously leave the negative to the mercy of any particular printing-process.

In photography, we must preserve harmony, not only in the arrangement of the figure or figures, but in the placing and gradations of the lights and shadows. This is as necessary in a picture as it is in a musical composition — indeed, the two arts are synonymous, being merely different forms of expression. A musical arrangement is a tone-picture whose melodies are woven around the main theme, which always occupies the most important place in the composition and holds the attention. Were the minor melodies given equal prominence, the real theme would be unnoticed. In other words, harmony would be lost.

Likewise, in our pictures which are composed of lights and shadows, we must arrange our tone-values so that the main subject stands out prominently, all secondary objects being so lighted that they will contribute to the beauty and interest of the picture and, at the same time, not detract by too great importance from the main part of the composition.

The following method, which offers great latitude in individual expression does not require elaborate preparation, no trays or chemicals being used. The materials and tools, consisting of powdered pumice and graphite and a couple of brushes, can usually be found in any home.

To prepare the graphite, grind the lead of a soft lead-pencil upon a fine file — a nail-file answers admirably — taking care that no particles of wood are included. Two grades of pumice should be used — the usual commercial product and a finer grade, such as dentists use.

To begin operations, place over the forefinger a pad of three or four folds of soft old muslin, free from starch. Place on the film side of the plate to be treated about half a teaspoonful of the coarser pumice. With the padded finger

grind the film carefully in long, circular strokes, first the long way of the plate and then across, leaving the face, hands and arms to be ground last. Make the strokes lap and be sure not to use too much pressure. If you desire merely to roughen the surface of the film, very little black should show upon the cloth; but if the part is to be reduced by grinding, the cloth will become black very soon, because you will need to use more pressure. Care should be taken, however, not to overdo.

Examine the plate often, brushing off the pumice with a broad, camel-hair brush. By holding the plate so that the light strikes the face of it, one can see whether the grinding is finishing up evenly. There should be no shiny spots left, and the pumice should be ground well down into the pores of the film, not merely below the surface. Some brands of plates grind more easily than others, and different developers and fixing-baths produce different degrees of hardness in the film.

The face and hands should be ground next with the finer pumice, using the bare finger instead of the cloth pad. Be sure that your finger is not moist from perspiration.

Upon completing the grinding, brush carefully, examine critically and, placing the plate upon the retouching-desk, decide upon the parts to be reduced or strengthened to help balance the negative.

In a contrasty, hard plate the highlights are reduced by grinding. For a small surface use a tuft of cotton wound tightly about the end of a pointed stick or brush-handle and dipped into the pumice. Care must be taken to keep the hands from touching the ground plate, a piece of cotton or linen cloth being held always between the third and fourth fingers for the hand to rest upon.

Many home-portraits lack interest because the lighting is too evenly distributed over the entire figure, or on account of distracting pieces of furniture in the background, or ugly wall-paper. In outdoor work a neighbor's house, a barn or fence may intrude. By the grinding-process all these objectionable features may be subdued or entirely eliminated, and by throwing the hands, arms and garments into lower tones, the proper emphasis is given to the face.

When a part of a window is included in the picture, its whiteness is usually altogether too pronounced to harmonize with the rest of the



THE PROBLEM

H. A. STORER

composition. This difficulty can readily be corrected by grinding down the excessive whiteness to its relative value.

In taking out parts of the image, a little home-made brush is most effective. Cut stiff bristles from an old clothes-brush, and, with heavy thread dipped into glue or mucilage, tie them to a small, pointed stick. Then trim the bristles to a quarter of an inch in length. Grind with fresh pumice the part to be scrubbed out and merely jar the plate to remove the surplus powder instead of brushing it. Apply this little brush and renew the powder frequently by grinding lightly in this way. Often a plain background is greatly improved and the whole picture made more interesting by working in variations of shade by grinding.

When it is desired that small surfaces should print just a little darker than they have photo-

graphed, wipe off the grit with the small cotton swab moistened in turpentine. Larger surfaces which need a little strengthening may be wiped gently with a soft cloth.

But let us again examine the plate. The hard lights are brought down, but still there is discord and we quickly see that the shadows are too thin. To do away with this difficulty, one should turn to the graphite. Apply with a sable-brush, No. 6, and fill in the shadows which need strengthening. Brush in firmly and accurately. Avoid working over and over the same place, for, in that case, the surface is likely to become smooth and refuse to take the lead.

The graphite is extremely valuable in background-work. Any effect one wishes may be brushed in — even to make a charming interior with appropriate furniture, or an outdoor-setting,



MRS. S.

H. A. STORER

when the pose and costume call for it. Occasionally, when greater intensity is required than what the plain graphite will give, a very soft pencil can be used over the parts.

All the retouching on the hands and face should be done before any powdered graphite is used, for one is likely to rub the work. Those parts upon which the knife is to be used should be carefully wiped free from grit with the cotton swab before starting to etch. With ordinary care, these ground plates can be kept in as good condition as any others.

The portrait of "Mrs. S.," which accompanies this article, serves to illustrate the method. The subject was seated near a window and a plain, black cloth was used to hide undesirable parts of the background. The first proof showed the entire figure strongly lighted, the hands being even more intense than the face.

In the finished print, the proper gradations have been given each portion of the picture and the plain background changed to one of greater interest. A corner-effect was produced on account of the position of the bench. In "The Problem," the subject, taken unawares, was standing before a blank wall, and the blackboard was worked in by grinding that part of the negative only, the remaining parts being protected by a piece of cardboard, cut so that it covered all but the part to be darkened. Then the plate was coated on the back with retouching-medium and the figures put on with a soft pencil.

A little practice will be required to become entirely familiar with this method of working; but, once mastered, it will yield results superior to those obtained by working over a ground-glass substitute.



BEFORE ETCHING



AFTER ETCHING

Etching in Portrait-Photography

CLARA WEISMAN

TO become a competent retoucher, one should also become proficient in the art of etching. Very much of what is vital in a picture is enhanced by skilful work with the etching-knife. As much often depends upon the etching as the retouching, and portraits would represent more truthful likenesses if the etching-knife were used instead of an excess of lead. Retouchers often build up to opaque spots in order to hide or to subdue them, thereby destroying delicate tones and forms instead of taking out the defects by the use of the knife.

A good retoucher, also skilled in etching, can do more sometimes to produce good and satisfactory pictures than the posing-artist. If necessary, persons can be improved greatly in general appearance by the use of pencil and knife, for portraits must be made to please the subject. So many things can be done, a little change here and a little change there, that even the subjects themselves are not aware of. The portraits please and yet no observer can tell just why. If the imperfections are not removed or subdued, they stand forth prominently, written as it were in all the force of expression possible. An imperfection is surrounded by what is preferable and beautiful, isolated, so to speak, and therefore it has the power to attract attention and therefore is objectionable. During movement or change of expression certain aspects,

forms or marks are not noticeable whereas they would be in a photograph.

Good etching-knives can be obtained at any stock-house. It is preferable to have several, one for delicate and others for heavier work. Very satisfactory results can be produced by the use of a small penknife of good steel. A sewing-machine needle placed in a penholder and flattened like the blade of a knife, if made very sharp, is very desirable. Good metal is necessary. Too much emphasis cannot be placed on the fact that an etching-knife must be kept sharp during its use. Nine-tenths of the failures in etching are the result of dull tools. A good stone is necessary to sharpen them. Moisten the stone and lay the flat side of the knife on it perfectly flat and even, and move it back and forth until it is sharp. A few strokes over the leather of a shoe aids to produce a more delicate edge. The etching-knife should be so sharp that it will shave the film instead of scratch it. If any part of it scratches, it is not fit for use. To test the knife, try it on the edge of a dryplate or on a discarded negative.

No one can advise how the tool should be held in accordance with the highest technical standpoint. In a general way, hold it as one holds a pen or pencil. Then as the etcher works best, either to the right or to the left, make strokes that will remove or alter the imperfec-

tion as desired. Sometimes one part of the knife works better than another, or one side better than another. Hold it and use it as it works the best. Make short strokes rather than long ones—a more even result is obtained. Use the point to remove little spots or lines and the blade for larger and broader places. Very much of one's success depends upon these things. Serious trouble may arise by being careless in the least with the tools.

Etching requires a great deal of patience and painstaking. A steady hand is necessary, also a knowledge of what is wanted in making any

what is necessary to complete the improvement of the negative image.

It is much easier to etch in the dense than the transparent portions of the negative, for the etching is more likely to show in the transparent portions. It must be done deeper than the surrounding tone because the scraping causes the film to be less transparent than the surrounding color, consequently printing lighter.

By the use of an etching-knife, human expression can be changed in a moment's time, where otherwise, perhaps, another sitting would be necessary. Nature's tendency is symmetry in



BEFORE RETOUCHING AND ETCHING



AFTER RETOUCHING AND ETCHING

change in the negative. With this large equipment, success is assured and through it at least half of the difficulties are already overcome. Etching more than compensates for the effort.

As the film is smooth and hard, some retouchers prefer to use the etching-knife on the film before the retouching-medium is applied. A little fine, dry pumice-stone powder rubbed over the place gives the negative a tooth so that the knife may be applied with greater ease. Other retouchers prefer to etch after all the retouching is complete. In many respects this is best, as one is likely to see more clearly just

its make-up; but how often one eye is a little smaller than the other, or by the effect of strong light one is somewhat contracted. The bright spots or catch-lights often need to be changed in size and position. Undue lights that cause little objectionable effects on any of the features, particularly a puffed look about the corners of the mouth, should be removed or subdued with the knife. A double-chin, so objectionable to some subjects, may be removed entirely, if so desired, with perfect success.

Many changes can be made here and there by the wise retoucher that may please the vanity

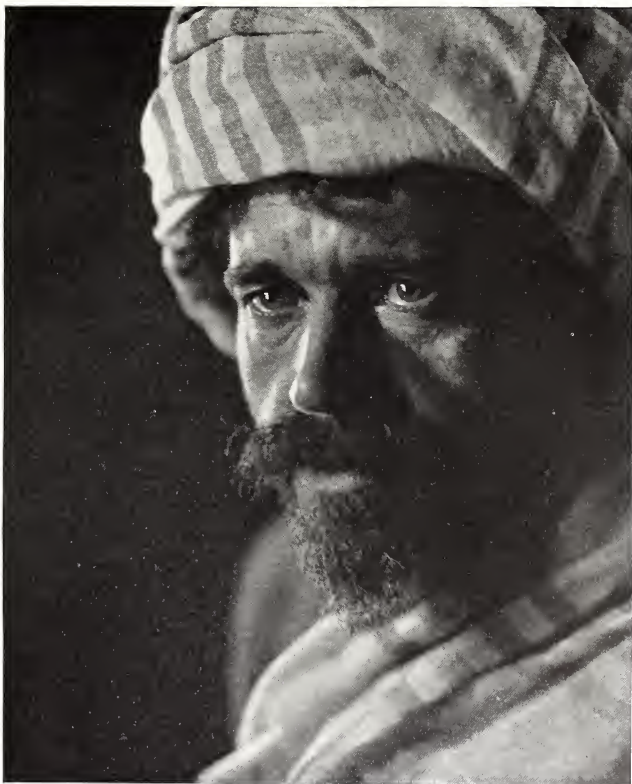


POMONA

MINNA KEENE, F.R.P.S.

of the subject. No one is pleased with defects stamped in black and white in a picture. To explain further, suppose a woman having splendid features possess a short neck so that the shoulders in perspective seem to meet the ears. With a little clever workmanship the shoulders could be etched down and the whole effect changed without marring the character of the individual, but instead, the character is enhanced. Large necks can be made smaller, also large hands which so often appear larger than the originals. Large figures may be made to appear more slender. Before attempting anything of this nature, it is advisable for the beginner to draw the outline of the figure very carefully, then etch to this line. With this care the proper form may be preserved without any apparent suggestion of the alteration.

In the illustrations many changes have been made just to show, in a measure, what can be done. In the oval portrait of the girl, note the alterations in the hair, in the outline, with its long highlight on one side subdued, and a more beautiful line over the top of the hair continued in the line beyond the ear on the other side. A softer effect is produced over the other ear by the use of pencil and knife. A more beautiful contour of the chin is effected by the pencil, through which the chin is also made stronger. The collar, the little lights across the waist and the shoulder-line are also varied. Little as these alterations are, yet note the great difference of effect and what each means. Such marked changes as those in the mouth are rarely necessary, yet often some slight alteration is quite necessary. The breadth of the nose is



AN ARAB HEAD

HELMAR LERSKI

changed with the little strong light at the side, yet the effect is felt. The changes in the eyebrows and the eyes make a very pronounced difference in the appearance. Some changes are absolutely necessary in most pictures. A little animation or spirit can be put into a self-conscious or sober expression by a little change in the eyes or the mouth.

In the profile, also, changes have been made in the outline of the hair. The eyebrow and the eyelash have been made more pronounced, the nose has been shortened and the lips have

been made heavier. The expression and personality have been completely changed.

These instances go to show that an etching-knife is a very important implement in the studio. Etching may be utilized in very many ways other than those mentioned. Drapery and backgrounds in portraits can be improved. In landscape even the amateur may find it a very great help; in backgrounds, for instance, much can be done to beautify, to add or to remove by the use of an etching-knife, India-ink and red opaque.

My Bonnie Little Lass

WILLIAM LUDLUM, Jr.

Illustration by Howard S. Adams

Gaily tripping o'er the grass
Comes my bonnie little lass,
Just as bright and just as airy,
Just as light as any fairy.



Eyes to match the heaven's blue,
Windows that a soul peeps through;
Cheeks as red as any rose,
Such a saucy little nose!

Hair that shimmers golden gleams
Radiating stray sunbeams;
Mouth as sweet as any cherry,
Always laughing, always merry.

Little heart that's pit-a-patter,
Even tho' not much the matter,
Little legs that run and race,
Setting older folks a pace.

Little voice that pipes and sings,
Sweet as any bird on wings,
Little hands that creep confiding,
Mother's love to hold abiding.

Little lass that's all o' mine
Clinging to me like a vine,
Winding all about my heart,
Of my life the better part.

Gaily tripping o'er the grass
Comes my bonnie little lass,
Just her equal no one knows,
Top of head to tip of toes.



MOTHER-LOVE
RUDOLF DÜHRKOOP



EDITORIAL

Fees for Expert Advice

THE generosity with which specialty-experts are supplying technical information, when called upon, without even a semblance of remuneration, has brought up the question of compensation for such service. Publishers of periodicals, real estate brokers, stock-brokers—all, except lawyers, cheerfully dispense information gratuitously, in the hope that the inquirers may become customers. Lawyers, however, like physicians, charge for each consultation, the price of which is generally five dollars. If one remonstrates, they will say, "I am charging you five dollars for what it took me a great deal of time and money to find out." For the same reason, the photographic expert, when called upon to give a remedy for removing stains from a valuable negative or for saving a faded print that cannot be duplicated, is justified in asking remuneration. Of course, when such difficult tasks are presented to him, personally, and the work is done well, he makes out a bill for service. However, the Editor knows a professional technician who considers it undignified to make a charge for a piece of photographic work that does not happen to consume much time or effort. He continues to be poor, as may be expected of a man who places so low an estimate on his technical ability. And yet this must not be confounded with the ordinary courtesies of life; for there are instances where only a spirit of greed would actuate a person to accept payment for an obviously slight service which was performed without effort or expense.

Yes, in the Editor's opinion, the photographic expert has every right to charge for sound and practical advice, to which end he ought to prepare a list of different classes of work with the prices attached, or have it understood in advance what would be the probable charge for the service to be rendered.

In conclusion, the Editor has frequently been asked to explain the dearth of positively-skilled photographic specialists—men who can be trusted to restore, not ruin, a faded or stained daguerreotype, to mend a broken negative or to remove blemishes from a valued print. To tell the truth, there are many quacks among the so-called photographic specialists, the same as in other professions; and, *per contra*, there exist not a few highly-skilled experts, such as

Hollinger, of New York, who, by the way, has grown rich by his technical cleverness in restoring valuable daguerreotypes and ambrotypes.

Inconsequential Photography

MANY an amateur has wondered why enlargements from his small negatives have failed to make an impression when placed on exhibition and seen by intelligent persons. It has probably not occurred to him that these large prints frequently lack character or interest. The reason is not far to seek. The negative or subject was not suitable for enlarging, to begin with, and the worker had no definite conception of what he wanted to accomplish by the process, save the mere purpose of producing a print of large dimensions. Being large it must be impressive, arrest attention. Here the exhibitor made a serious mistake. Even if he had a suitable subject, he would not know what medium best expressed the character of his theme, whether bromide, carbon, gum, bromoil or platinum; for none of these processes, selected at random, lends itself to the proper presentation of a given subject. Imagine, for instance, an enlarged print of a wood-interior done in blue carbon or red gum, or one of a portrait in a similarly incongruous color.

This branch of the photographic art is entitled to as much thought, judgment and taste as the composition of the picture itself. It should be more than a mechanical amusement and not have for its object the shallow satisfaction of seeing things done on an enlarged scale. The real and ultimate purpose of the miniature camera is the production of large prints in which the user may express his abilities as an artist and interpreter. In case of inexperience in transmitting to the enlargement the pictorial character of the original theme, the camerist can, at least, experiment with the various media and by comparison eventually ascertain which of them, in his opinion, best interprets the spirit of his small negative. At all events, if undecided what color to choose, he can imitate the gentleman who is in doubt as to what color of cravat to wear, and finally has recourse to black. In photographic printing, black will generally be found safe to use, when another color is not available or does not yield the proper tonal suggestion.

PHOTO-ERA MONTHLY COMPETITION

For Advanced Photographers

Closing the last day of every month. Address all prints to PHOTO-ERA, Monthly Competition, 383 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer who advertises in PHOTO-ERA. If preferred, the winner of a first prize may have a solid silver cup, of original and artistic design, suitably engraved.

Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. **Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind, or with thin wood-vener. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value. Persons interested to have one of these PHOTO-ERA prize-collections shown in their home-city will please communicate with the Editor of PHOTO-ERA.

Awards—Foreign Travel

Closed March 31, 1914

First Prize: W. H. Rabe.

Second Prize: Juan B. Moreau.

Third Prize: Alexander Murray.

Honorable Mention: Thomas Carlyle, John W. Gillies, Louis A. Goetz, Leon Jeanne, Blanche McGregor, Richard Pertuch, Anson M. Titus, E. Blake Whiting.

Special commendation is due the following workers for meritorious prints: John Andrews, F. Newton Heany, A. E. Murphy, Wm. S. Rice.

Subjects for Competition

"Growing Flowers." Closes May 31.
"Telephoto-Work." Closes June 30.
"Landscapes." Closes July 31.
"Outdoor-Portraits." Closes August 31.
"Waterscapes." Closes September 30.
"Indoor-Portraits." Closes October 31.
"Decorative Applications." Closes November 30.
"My Home." Closes December 31.
"Winter-Scenes." Closes January 31.
"General." Closes February 28.
"Flashlights." Closes March 31.
"Interiors with Figures." Closes April 30.
"Street-Scenes." Closes May 31.
"Wet-Weather Subjects." Closes June 30.
"Outdoor-Sports." Closes July 31.
"Public Buildings." Closes August 31.
"Clouds in Landscape." Closes September 30.
"Garden-Scenes." Closes October 31.
"Vacation-Pictures." Closes November 30.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the publisher will give them the choice of photographic supplies to the full amount of the prize (\$10.00), or a solid silver cup of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

June

AND what is so rare as a day in June ?

Then, if ever, come perfect days.

Then heaven tries the earth if it be in tune,

And over it softly her warm ear lays.

— *Lowell.*

Landscapes — Photo-Era Competition Closes July 31

WITH Nature in all her smiling early summer loveliness the devotee of landscape-photography should be busy and happy, indeed. The delicate greens of the early summer before the young leaves have become darkened by age and dust give a most pleasing lightness and transparent quality in the foliage that is a joy to the student of light and shade. This quality is particularly evident when looking rather into the light, and beech-leaves have a particularly translucent texture that gives almost the effect of a tree in bloom, if taken against the light.

This is an ideal time for views that include running water, as the streams have recovered from their riotous and muddy state following the spring freshets and have not yet dwindled to the puny and pitiful condition which follows the summer drought. The beautiful curves of a brook flowing through an open field are capable, if rightly handled, of making an admirable picture; but, carelessly treated, it becomes simply a brook — "and nothing more."

If a place can be found where the banks form a double curve, so much the better; set up your camera at that point and so arrange the composition on the ground-glass that the curve begins at the lower corner, perhaps one bank cutting the lower margin, the other starting a bit up on the side, but making the space much greater on one side than the other, not letting the corner come in the center of the brook. Let the curves lead diagonally into the picture-space, disappearing at the opposite side from that on which they enter, either lost in the distance or hidden behind foliage. Make the horizon rather high and try to keep out of the print everything that would draw the eye from the serpentine line of the brook which forms your center of interest. This same treatment can be used in handling roadways, paths or anything with similar long, curving lines.

When one comes upon some view that looks attractive, it is well to pause and analyze the subject a little, rather than set up the camera at the first viewpoint and make the exposure. Sometimes a little change in position will make all the difference between a *picture* and a mere photograph. To a certain extent the artist with a camera must accept Nature as she presents herself to him; nevertheless, the same view as portrayed by different photographers may differ almost as widely as the same thing presented by different artists with the brush or pencil.

The selection of the viewpoint, the condition of light, the use of a soft or sharp focus and the adjustment of the exposure give the photographer so large a measure of control that it seems almost unlimited.

When you come upon a scene that looks attractive to you, then try to determine wherein its attractiveness lies. If it proves to be more pleasing in color than in form — beware, for its beauty is not of the kind to be captured by the camera. If, however, the shapes of the trees or curves of brook or road are good and lend themselves to a simple composition, then study them further. If some discordant note is presented, try by changing your point of view to evade it or conceal it behind some more attractive object.

One of the convertible lenses is very useful in getting the desired effect, for very often when the lens includes too much you lose by a nearer approach a certain effect of perspective, or a pleasing relation of the near objects to those beyond.

With the convertible type of lens, all one has to do is to unscrew one of the lenses and by the use of the extension-back to obtain a new focus with the image very greatly enlarged. Where either front or rear lens may be used separately, one has a choice of three sizes from the same viewpoint.

One's individuality and choice of style will influence the focusing very largely; but one general rule is always safe to follow and that is that the distance should never be in sharper focus than the foreground. The effect of atmosphere is to soften both in color and in sharpness of definition, and this effect is more and more evident as the distance increases. For artistic effect, therefore, and to obtain the much-desired atmospheric effect, the foreground should be sharply focused and the distance allowed to remain a trifle diffused.

The amount of softness may be controlled by the stop used. A good way is to focus accurately on some prominent object in the foreground and then slowly move the stop down until the desired amount of detail is observed in the middle-distance.

If, however, it is desired to have the whole image sharply in focus, then start with some object not in the immediate foreground but in the next plane. When that is in focus, you will find that both come gradually into better definition. Use as large a stop as is consistent with the amount of sharpness desired, as the long exposure which results from the use of small stops gives opportunity for movement should a slight breeze chance to come along your way.

Do not make the mistake of trying to include too large a portion of the world on one little film. Many a photograph may be cut up into two or three views having greater artistic worth than the whole. Very broad, distant views are difficult to render with any great degree of satisfaction. The mountains that loom so large to our vision are very likely to seem dwarfed and, quite possibly, because of the blue color given by the intervening atmosphere, are often lost against the sky.

A ray-filter may overcome this last difficulty, but care must be taken that too deep a screen is not used, otherwise all atmosphere will be lost — a fault nearly as serious as the one we seek to remedy. A three-times screen, that is one that requires three times the normal exposure, is a good all-around screen to use for landscape-work. It will bring out the clouds and distant hills without darkening the sky excessively or obliterating all atmosphere.

The effect of distance is enhanced and the plane-values better differentiated if the immediate foreground can be thrown into shadow. Do not, however, get too near to the tree that may cast it and allow the branches to encroach on your sky. As a rule, unsupported branches are bad in any position, although sometimes if they are graceful and delicate they may be allowed to frame some attractive vista and greatly add to the composition.

The introduction of figures or cattle, or even groups of buildings, is a matter that requires the exercise of a good bit of judgment. Often they add an element of life that is very pleasing to many, but they must not be given enough prominence to divide the interest too evenly. You must have either a landscape or a figure-study, not both. If figures are to be introduced, try, if possible, to have them appear unconscious of the camera. A position turned away from the camera and looking into the picture gives a more pleasing result than one looking directly at the lens. A group so placed in the middle-distance may form a pleasant focus for the eye.



IN A SWISS VILLAGE

W. H. RABE

FIRST PRIZE — FOREIGN TRAVEL





ON THE VIGA CANAL

J. B. MOREAU

SECOND PRIZE — FOREIGN TRAVEL

Photographs Transmitted by Wireless

THE world marveled when photographs were first sent by telegraph. But inventive genius knows no bounds, and just as this wonderful device is reaching a state approximating perfection in practical use, comes the announcement that photographs are now being transmitted by wireless. It was the next logical step, yet even the most optimistic hardly expected it so soon. The apparatus is being tried with great success by one of the leading Paris journals. While the process still remains a secret with the Parisian inventor, it is known that the apparatus is still crude but gives great promise of being considerably improved.

Slow Plates for Fast Work

FOR very fast work there seems to be a growing belief in the efficacy of slow plates, or at least of plates which are decidedly less rapid than the fastest of all. Thus Dr. Abrahams, at the Royal Photographic Society, recently observed that though plate-makers "evolve a higher H. and D. value year by year, it has never been these very fast plates which have appealed to me as a high-speed photographer." In a recent book on photography for the press we have much the same view put forward. "The beginner in press-photography cannot be too often warned against using plates of very high sensitiveness." "A medium plate will stand far more forcing than one of high speed." We know several expert high-speed workers, also, who habitually employ plates which are only one-half as fast, according to their maker, as other plates which he manufactures. Dr. Mees remarked several years ago that theoretical conclusions pointed in the same direction. This need not upset our ideas of rapidity and what it implies. It

must be remembered that in work of this kind the correctly-exposed result is out of the question; all that can be attempted is to obtain as good a rendering as an admitted underexposure will yield. The correct rendering of the gradation of the original, to secure which, consciously or unconsciously, is the aim of every photographer, can only be obtained in the shortest time by the use of the fastest plates. — *Photography and Focus.*

Buildings in Busy Streets

TO the novice the problem to photograph a building without showing busy street-life seems almost insurmountable. The method of the "old-hand" was to use stop 256, F/64, in the lens and give sixty-four times the correct exposure at F/8. For instance, if one-fourth second is the correct exposure at F/8, it will be sixteen seconds at F/64. By this method sufficient time elapses to permit many figures to move past the building without making any impress upon the plate. Extra rapid plates have now come into such general use, however, that the latitude is greatly reduced. Moreover, in bright light, even the times quoted would result in overexposure, and correct timing would show blurred images. The easiest course to pursue is to use a deep color-screen, say eight or ten times, with a non-orthochromatic plate. This, under almost any circumstances, would increase the exposure to several minutes, which would ensure satisfactory results.

The Feminine of It

"Those camera-fiends from the newspapers are awfully annoying," remarked the chorus girl.

"Indeed they are," replied her chum. "But don't move, dear. There's one just going to take us now."



NELSON'S PILLAR, DUBLIN

ALEXANDER MURRAY

Strong Prints from Weak Negatives

It very often occurs that one has a negative, good in all respects except that it is wanting in contrast, and consequently yields only weak, flat prints, writes J. M. C. Grove in *The Amateur Photographer*. Intensification is a risky process, and there may well be cases in which one would hesitate to subject a valued negative to its chances. It is well, therefore, to have in reserve a printing-process by which good, strong prints may be obtained from such a negative without interfering with the negative itself.

A piece of cold-bath platinotype paper is printed under the negative for a very much longer time than would be necessary in the case of an ordinary print. Assuming the negative to be a thin one, the printing might last for ten or fifteen minutes in the sun, or for a whole day, or even more, in dull weather. It will be found that, after a certain time, the print shows a negative image, and that, if the printing be carried still further, brown stains appear under the thinnest portions of the negative. If these portions consist of plain glass,

the print will be ready as soon as these stains appear; but if they are not plain glass, it should be removed before they appear — that is to say, when there is a fairly strong negative-image on the paper. A little practice enables one to judge the exposure correctly. The print is then developed by immersion in a dish of cold water. The image appears gradually and may be removed when dark enough. It may also be developed in hot water, but in that case the image flashes out instantaneously, and there is no control. The subsequent processes of clearing and washing are as usual.

Two reproductions accompanying the original article illustrate the difference between an ordinary print and the platinotype specially treated. Prints made by the above process are decidedly warm in tone.

The process is one that opens up great possibilities for the possessor of weak or thin negatives who wishes to produce good platinotype prints therefrom. It will be found that the above method gives even greater contrast and strength than that produced by the addition of bichromate of potash to the developer, a plan frequently advocated for the purpose of obtaining brilliancy.

Mounting Large Prints

THE photographic worker, suddenly confronted with the necessity of mounting, say, half a dozen 18 x 24 bromide enlargements, is not always at his ease in confronting the job, writes G. T. Harris in *The British Journal of Photography*. The ordinary methods he employs for mounting his smaller work may not be applicable to the larger size, and I have known even quite good firms that preferred to send out such sizes to be mounted by a trade mounter rather than endanger the print by doing it themselves. I have never had any failure myself when using the following method: A smooth board suitable to the size of the print, or a clean table-top, receives the print face down, the corners of the print being fixed to it by ordinary darkroom pins. A solution of the best glue, of about the consistency of cream, is sparingly applied with an ordinary house-painter's brush, and worked thoroughly all over the print. The desirable object is not a thick coating of glue, but an infinitesimal film evenly applied. It must be worked with the brush until practically every brush-mark has disappeared and only an even tacky surface remains. The print is now laid down upon the mount, and, with the palm of the hand or a clean cloth, smoothed into contact with the mount by working from the center to the edge radially in all directions. Once the print is in contact all over the mount and free from any trace of air-bells, it can be finished by going over the surface with an ivory or bone burnisher, a piece of mounting-board being laid upon the print to prevent friction-marks from the burnisher. The temperature of the mounting-room in winter should be attended to, or the glue will set before the print is ready for laying down.

One Screen for All Purposes

COLOR-CORRECT photography, by the use of panchromatic plates and a deep screen, is gradually making its way amongst more advanced workers. Modern discoveries have contributed very largely to this end by providing a plate and screen which, when used together, do not necessitate any prohibitive increase in exposure.



DUTCH GIRLS

THOMAS CARLYLE

HONORABLE MENTION — FOREIGN TRAVEL

Twenty or even forty times the normal was usually requisite; now four or five times will suffice. The photographer who adopts such a combination finds that it grows on him. He learns that the idea that for one type of subject one screen is needed and another for another is a fallacy. If he use the ordinary orthochromatic, he may vary his screens to advantage; but when he adopts the color-correct method in its entirety, there is no need to change about. Whether he is photographing a spring-landscape or an oil-painting, a portrait or a vase of flowers, he may be quite confident that his combination of plate and screen will give him what his eye sees, as far as a faithful rendering in monochrome of the intensities of light and shade in the original is concerned.

Photography and Focus.



IN MUNICH

RICHARD PERTUCH

HONORABLE MENTION — FOREIGN TRAVEL

THE ROUND ROBIN GUILD

An Association of Beginners in Photography

Conducted by KATHERINE BINGHAM

This association, conducted under the auspices of PHOTO-ERA, and of which PHOTO-ERA is the official organ, is intended primarily for the benefit of beginners in photography. The aim of the association is to assist photographers by giving them information, advice and criticism in the Guild pages of PHOTO-ERA and by personal correspondence. Membership is free to subscribers and all regular purchasers of the magazine sending name and address to PHOTO-ERA, The Round Robin Guild, 383 Boylston Street, Boston.

The Whites in Sulphide Toning

If the whites of sulphide-toned prints are slightly discolored, try a different course on future prints. Immersion for about a minute in a half-strength sulphide-bath and washing for five minutes before bleaching and re-developing ensures whites that cannot be distinguished from those obtained by the hypo-alum process, states Arthur Morang in a recent letter to the writer.

Stops or Diaphragms

To the beginner in photography, one of the puzzles early encountered is likely to be that of the use of different-sized openings in the lens, known variously as apertures, stops and diaphragms, and a little explanation of their reasons for being and their proper use may not come amiss.

This is no place for a discussion of advanced optics; but it is necessary to understand that not all rays of light which pass through a lens reach a focus in the same plane, and those most widely divergent are the rays which pass through the outer circumference, whereas those which pass through the center are the ones that give the "sharpest" image.

To obtain a sharp image or focus, the ground-glass is moved back and forth until the plane is found where the greatest number of rays come to a focus; but the outer rays which meet either in front of or behind this point cause still a slight blur in certain parts of the image. Now, if a stop is inserted somewhat smaller than the lens-aperture, it cuts off some of the most troublesome of these rays and prevents them from reaching the plate at all. The smaller the stop used, the more rays are intercepted and the sharper the resulting image. It will be seen readily, however, that as the amount of light which reaches the plate is diminished, the length of time required for adequate exposure is increased.

There are two systems of stops in common use to-day, viz., the Uniform System (U. S.) and the so-called "F" System, which are based on the relation of the diameter of the stop to the focal length of the lens.

Mr. F. Dundas Todd has given the simplest possible explanation of the latter system, it seems to me, in likening it to a fractional notation. As in that instance $\frac{1}{4}$ means that one is to be divided into four parts, so the same method is employed in expressing the relation of stop to focal length, and when we write $F/4$, we mean that F , standing for focal length, is to be divided by 4; that is, that the diameter of the stop is one-fourth the focal length of the lens.

The U. S. System starts with $F/4$ as a basis, calling that No. 1; then each stop is double the area of the next smaller and, of course, half the area of the next larger. Starting, then, with No. 1, the next stop will be $\frac{1}{2}$ the area and will be No. 2; the third will be half

that, or $\frac{1}{4}$ of No. 1 stop, making it No. 4; the next will be $\frac{1}{8}$ of No. 1, giving No. 8, and so on, No. 16, No. 32, No. 64, No. 128, No. 256.

The F System doubles in the same manner, but the method of figuring is a little complex to quote here. It is enough to remember that it represents the fraction and is figured from the focal length of the lens.

F	U. S.	F	U. S.	F	U. S.
4	1	11.3	8	45.2	128
5.6	2	16	16	64	256
8	4	22.6	32		
		32	64		

You will note that stop 16 is the same in both systems.

Various methods are used for the introduction of the stops. With a single lens, such as is used in the cheaper grade of hand-cameras, the stop is inserted in front of the lens and can be changed by pulling a little slide. In the higher-grade lenses, which are compound, the stops are between the two parts and are usually of the iris-type, opening and closing like the wonderful mechanism of the human eye and adjusted by a sliding lever on the face of the shutter.

For ordinary snapshot-work, one usually needs all the light obtainable; therefore, the largest stop should be used, which, of course, is the one which has the smallest numeral; but in case of extra strong light in sea-views or distant mountains a smaller stop may be used.

As the size of the stop is halved, the length of the exposure is doubled. For instance, if you give a view $\frac{1}{25}$ of a second with stop U. S. 8, should you use stop 16 the exposure would be doubled. The $\frac{1}{10}$ second on your shutter will be nearest right probably.

A large stop, then, is the one to use when the exposure must necessarily be short, as in pictures of children or animals; and a good general rule would be to use as large a stop as possible in every case, for the use of small stops gives that objectionable wiry sharpness and lack of atmosphere which are to be avoided.

The time when a small stop is required is when the view to be taken contains objects at such varying distances from the camera that not all of them can be focused sharply. A good way to do in such a case is to get as sharp a focus as possible on some important object in the middle-distance, then by stopping down bring the nearer and more distant things into the desired degree of definition, remembering that a little softness in the distance gives an atmospheric effect much to be preferred, from an artistic standpoint, to equal sharpness throughout.

A good stop for all-around "general utility" is U. S. 8— $F/11.3$. For the ordinary landscape in good sun an exposure of $\frac{1}{25}$ second with this stop gives the best results.

THE ROUND ROBIN GUILD MONTHLY COMPETITION

For Beginners Only

Closing the last day of every month. Address all prints to PHOTO-ERA, Round Robin Guild Competition, 383 Boylston Street, Boston, U. S. A.

Restrictions

ALL Guild members are eligible in these competitions provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Monthly Competition for advanced workers still remains eligible in the Round Robin Guild Monthly Competition for beginners; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

Prizes

First Prize: Value \$5.00; *Second Prize:* Value \$2.50; *Third Prize:* Value \$1.50; *Honorable Mention:* Those whose work is worthy will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

Subject for each contest is "**General**"; but only original prints are desired.

Prizes may be chosen by the winner, and will be awarded in photographic materials of any nature sold by any dealer or manufacturer advertising in PHOTO-ERA.

Rules

1. These competitions are free and open to all members of the Round Robin Guild. Membership is free to all subscribers and regular purchasers of PHOTO-ERA sending name and address for registration.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P. or black-and-white paper having the same gradations and detail.

3. A package of prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.

4. Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. **Be sure to state on the back of every print exactly for what contest it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15 unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express, Section D Rates, very cheaply and with indemnity against loss.

Awards — Beginners' Contest

Closed March 31, 1914

First Prize: L. O. Bogart.

Second Prize: L. Vinton Richard.

Third Prize: Warren R. Laity.

Honorable Mention: George S. Akasu, F. W. Clough, Roland B. Hall, Myra D. Scales, L. N. Searles, W. Steleik.

Special commendation is due the following workers for meritorious prints: Allen F. Brewer, F. E. Bronson, Arthur F. Childs, Winn W. Davidson, Gordon Forsyth, W. E. Fowler, Herman Gabriel, F. Fay Guthrie, W. S. Hamburger, Wilfred E. Jost, E. Keaough, A. D. Kinsley, Geo. M. Maynard, Roscoe W. De La Mater, Jay Satterlee, Harry Sloan, S. Tsuru, S. W. Weakley.



ON THE RARITAN

WARREN R. LAITY

THIRD PRIZE — BEGINNERS' CONTEST



BEDTIME

L. O. BOGART

Quinone as a Toning-Agent

As a toning-agent for bromide prints and lantern-slides, writes Mr. E. S. Maples in *The Amateur Photographer*, quinone gives fine colors, quite distinct from those obtained by other methods. It has also the advantage of hardening the film, so that it will stand washing in hot water without injury. A suitable formula is: Quinone 1 part, potassium bromide 5 parts, water 200 parts. On placing the print or slide in this bath, the color rapidly becomes warmer, the final tone being a red chalk or the final tone of the Ferguson copper-process, but more red than yellow. It may then be washed and dried with little change of color. In a lantern-slide, however, there will be a general cloudiness or opalescence remaining in the film. To remove this, immerse in an after-bath of ten-percent ammonia, which clears the image, producing, at the same time, a considerable increase of contrast, and changing it to a beautiful warm black.

Quinone is stocked by large chemical firms and put up in tubes by Messrs. Lumière under the name of

"Quinochrome." The contents of one tube may be dissolved in 7 ounces of water, and is then ready for use without any addition.

Enlarging from an Underexposed Negative

Most photographers have at times difficult subjects to copy and reproduce. Recently I had to enlarge from a film so badly underexposed and underdeveloped that reproduction under ordinary circumstances was quite out of the question. When holding this *negative* facing the window, with a dark curtain as a background, I noticed that an excellent picture as a *positive* was visible. As an experiment I arranged the copying-camera *facing* the light, with the film between two sheets of glass, in place of the easel, and a black cloth as a background, about three feet behind the film. The lens was well stopped down and shaded, and a good negative was obtained, full of detail, but rather flat. I then made a P. O. P. print (untoned) and copied in the usual manner, and an excellent negative was the result. — *The British Journal of Photography*.

Answers to Correspondents

Readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Guild Editor, PHOTO-ERA, 383 Boylston Street, Boston. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.

A. E. W. — As a remedy for your **flat enlargement** when making another trial, shorten the exposure and carry development farther, keeping the temperature of the solution between 60 and 70 degrees. Should this fail, try another brand of paper, for the degrees of contrast obtained with various brands differ greatly.

F. B. — It surely ought to be possible to obtain a **four-times enlargement** from a Seed Non-Halation Ortho plate developed with Rytol. I have not made the actual test, but with brands of good, fine-grained plates, of which the Seed is surely one, there is seldom any trouble.

Since you appear to favor the Seed line, I would suggest Seed 23 for making **contact positives** from which to make enlarged negatives. Backed plates are rarely used for this purpose, although they are excellent. You will find that a piece of black paper placed between the plate and printing-frame back will do much to prevent halation.

There appears to be no reason why Glycin should offer any practical advantage over Rytol for developing plates to be enlarged. The most notable advantage of Glycin is its remarkable freedom from any tendency to **fog during prolonged development** in a very weak solution. For that reason it is the most widely-used tank-developer.

It is considered better practice to place a plate in the tray and flow developer over it from a graduate than to

slide the plate edgewise into a tray full of developer. **Bubbles** rarely form when this course is pursued, but should they do so it is very convenient to have a very soft, flat rubber-bound, camel-hair brush to pass carefully over, the surface of the plate to break air-bubbles and remove any adhering dust. The fine, clear **dust-marks** you mention may adhere to the negative while it is drying; in fact, they probably do. If these dust-marks give serious trouble, why not try soaking the negative by washing for five minutes in denatured alcohol? This displaces the water and evaporates very quickly, so that the negative is thoroughly dry in a very few minutes.

P. O. I. — In case of **stained prints** I usually recommend that the print be made over. It is cheaper, and also takes less time than to experiment trying to save or restore the stained print. Why not give up the idea of removing these stains which are due to chemical action and, in the case of alum having been used, they are well-nigh impossible to remove?

In the case of a stained print that cannot be replaced there is a sure remedy involving the trouble to make a negative through a color-screen.

D. P. C. — **The highest gloss** is obtained by squeezing prints to a sheet of plate glass previously polished with French chalk on a cloth. The advantage of glass over ferrotype sheets is that one can look through the former to make sure that the entire print is in contact without air-bells between print and glass.

M. N. N. — **Formulae with quantities in the metric system** will give you little trouble if you will use the conversion-tables to be found in the photographic annuals. If none is handy, 1 cubic centimeter equals 16.9 minims; 1 gram equals 15.4 grains.

D. P. — **To blacken the brasswork** on your camera, clean it thoroughly and dip in a solution of copper nitrate, 200 grains to the ounce of water. After a few moments' immersion remove and heat, when the desired result will be obtained.

P. R. N. — It is a well-known fact that the **monochrome or light and shade effect** of any scene may be had by viewing it through smoked spectacles. By putting a blue glass filter over the lens while focusing, the same effect is produced upon the ground-glass, where the actual view may be studied carefully in monochrome for its chiaroscuro value as well as that of line.

S. B. — The chief trouble with your photograph seems to be the **spots** on it. These spots appear to be the result of sediment in the developer, either reducer or alkali, which during development have settled on the surface and caused small areas of greater density.

N. A. Y. — **To see the view in a finder** when the camera is placed so high as not to permit it, hold a small pocket-mirror over the view-finder at an angle of forty-five degrees and look at the image thus reflected.



MOTTLED NOW THE ICY TRACK

L. VINTON RICHARD

SECOND PRIZE — BEGINNERS' CONTEST

Print-Criticism

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Guild Editor, PHOTO-ERA, 353 Boylston Street, Boston. Prints must bear the maker's name and address, and should be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.

H. G. — Your photograph, "Road, Gordon Park," is well composed and well lighted, but it is somewhat lacking in interest. With more suggestion of human life it would be improved materially. The subject does not seem to lend itself to oval printing. These fanciful shapes are suitable only for decorative purposes.

C. M. B. — "A Wet Night" would have been improved by even longer exposure than was given and very slow development in the tank. As a composition there are too many distracting highlights. The most successful night-pictures have only one principal source of light, while there are two in this instance. It is unfortunate that the sashes of the house at the right were painted white, for they are far too prominent, as the interest in the picture is entirely in the water-soaked street.

E. L. A. — Your winter-photographs are excellent, particularly in the rendering of snow. You have been fortunate in obtaining a gray sky and interesting snow-shadows. Crispness of the snow and the clear atmosphere is particularly well shown in the photograph of the "Bridge," but it has no art-value. The photograph of the house would have been better as a horizontal composition unless there were undesirable objects near by which are excluded by the vertical arrangement. The view in the open country could hardly be better, although the sky attracts too much attention to its being of a very striking character.

W. W. D. — Underexposure is the chief technical fault with your photograph entitled "Sunset Glow." Then, too, from an art-standpoint the subject contains far too much material, none of which seems to be more important than the rest. Whenever two or more cattle appear in a picture, they should form a closely-related group rather than be widely separated as in the present instance.

K. E. V. — Your subjects are rather lacking in general interest, but their chief fault lies in forced development which gives no snow-texture or detail in the highlights in "Winter's Solitude" or detail in the lower fruits of the "Harvest Offering." Ample exposure and normal development are the most direct means to success.

L. M. — Your picture of the old lady is very attractive except that the light is not properly controlled and distributed. The effect is somewhat flat, and the shadow on the nose tends to distort the shape of that particular feature. Try to concentrate your light by having it come from one source and supplement it by light reflected judiciously. Avoid too heavy shadows on the face. It is wrong to suppose that when a strong, impenetrable shadow is objectionable, it should not be lightened by retouching the negative. The art is so to make the original negative that little or no retouching is necessary.

C. B. F. — Your print, "Telling His Fortune," on which you asked for criticism, shows your usual technical skill, although some detail in the shadows would have been desirable. For instance, the man at the left merges off in solid black without the faintest suggestion



A BASKETFUL OF MISCHIEF

W. STELCIK

HONORABLE MENTION — BEGINNERS' CONTEST

of anything to sit upon. From an artistic standpoint, the kerosene-heater and the books under the table are distracting influences, and the woman reading, while she might be regarded as a foil for the other figures, ought to be in the background rather than in the foreground; that is to say, the figure is too large and too prominent because of the white waist and apron. There is really sufficient interest for the picture in the three persons playing cards, and as they have been posed there is unity because of concentration of interest.

G. F. — The contrasts in your photographs are too great because of the absence of detail in the highlights. The fault appears to be overdevelopment. Your exposures appear to be nearly correct, if anything a trifle under. Very likely better prints would be obtained by the use of portrait-grades of gaslight paper.

H. B. S. — Several suggestions might be made regarding your portrait, among them slightly longer exposure to get a better suggestion of texture in the coat and a better background than is furnished by white-painted sheathing. Then, too, a paper particularly intended for portraiture would give you better gradation, richness and depth than is found in the present print. In the main, this lighting is very good and the pose seems to be a very easy one.

Exposure-Guide for June

Calculated to give Full Shadow-detail, at Sea-level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take $\frac{3}{4}$ of time in table. From 8000 to 12000 feet use $\frac{1}{2}$ of exposure in table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8 or U. S. 4. For other plates, or stops, see tables.						For other stops multiply by the number in third column		
Hour	Bright Sun	Sun Shining Through Light Clouds	Diffused Light	Dull	Very Dull	F/4	U. S. 1	× 1/4
10 A.M. to 2 P.M.	1/60	1/30	1/15	1/8	1/4	F/5.6	U. S. 2	× 1/2
9-10 A.M. and 2-3 P.M.	1/50	1/25	1/12	1/5	1/3	F/6.3	U. S. 2.4	× 5/8
8-9 A.M. and 3-4 P.M.	1/30	1/15	1/8	1/4	1/2	F/7	U. S. 3	× 3/4
7-8 A.M. and 4-5 P.M.	1/20	1/10	1/5	1/3	2/3	F/11	U. S. 8	× 2
6-7 A.M. and 5-7 P.M.	1/15	1/8	1/4	1/2	3/4	F/16	U. S. 16	× 4
5-6 A.M. and 6-7 P.M.	1/10*	1/5*	1/3*	2/3*	1 1/2*	F/22	U. S. 32	× 8
						F/32	U. S. 64	× 16

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions under which one works. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop.

*These figures must be increased up to five times if light is inclined to be yellow or red. Latitude 60° N. × 1¼; 55° × 1; 52° × 1; 30° × ½.

SUBJECTS. For other subjects, multiply the exposure for average landscape by the number given for the class of subject.

1/8 Studies of sky and white clouds.

1/4 Open views of sea and sky; very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

1/2 Open landscapes without foreground; open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most tele-photo-subjects outdoors; wooded hills not far distant from lens.

2 Landscapes with medium foreground; landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; persons, animals and moving objects at least thirty feet away from the camera.

4 Landscapes with heavy foreground; buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

8 Portraits outdoors in the shade; very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

16 Badly-lighted river-banks, ravines, to glades and under the trees. **Wood-interiors** not open to sky. **Average indoor-portraits** in well-lighted room, light surroundings.

Example :

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an open landscape, without figures, in June, 4 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/20 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of "Table for Other Stops," opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/20 × 4 = 1/5. Hence, exposure will be 1/5 second.

For other plates consult Table of Plate-Speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/40 × 1/2 = 1/80. Hence, exposure will be 1/80 second.

PLATES. When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

PHOTOGRAPHIC EXHIBITIONS

Information for publication under this heading is solicited

<i>Society or Title and Place</i>	<i>Date</i>	<i>Particulars of</i>
LOS ANGELES CAMERA CLUB PHOTO-ERA Prize-Pictures, 1913.	May 18 to 30	T. K. Adlard, Secretary, 321 S. Hill St., Los Angeles, Cal.
WINNIPEG CAMERA CLUB Annual Exhibition.	June 2 to 13	J. M. Iredale, Secretary, Industrial Bldg., Winnipeg, Canada.
DAVENPORT CAMERA CLUB PHOTO-ERA Prize-Pictures, 1912.	May 11 to 23	Seth J. Temple, President, 62 McManus Bldg., Davenport, Ia.
MISSOURI CAMERA CLUB PHOTO-ERA Prize-Pictures, 1913	June 8 to 20	Chas. Lindenschmidt, Treasurer, Euclid and McPherson Sts., St. Louis, Mo.

Notes on the Use of Exposure-Meters

For those who wish to use a meter that is accurate in all conditions, we can recommend both the Wynne and Watkins. Both depend on the tinting of a sensitive

paper to a standard shade, thus giving the exact actinic value of the light.

For a practical and lucidly-written article on the use of exposure-meters, at all seasons of the year, see PHOTO-ERA, January, 1912.

Plate-Speeds for Exposure-Guide

Class-numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.
Iford Monarch
Lumière Sigma
Marion Record
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.
Barnet Super-Speed Ortho
Cramer Crown
Eastman Speed-Film
Hammer Special Ex. Fast
Imperial Flashlight
Seed Gilt Edge 30
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.
Anseo Film, N. C. and Vidil
Barnet Red Seal
Central Special
Defender Vulcan
Ensign Film
Hammer Extra Fast, B. L.
Iford Zenith
Imperial Special Sensitive
Paget Extra Special Rapid
Paget Ortho Extra Special Rapid
Seed Color-Value

Class 1, P. E. 111, Wy. 180, Wa.
American
Barnet Extra Rapid
Barnet Ortho Extra Rapid
Imperial Non-Filter
Imperial Orthochrome Special
Sensitive
Kodak N. C. Film

Kodoid
Lumière Film and Blue Label
Marion P. S.
Premo Film Pack
Seed Gilt Edge 27
Standard Imperial Portrait
Standard Polychrome
Stanley Regular
Vulcan Film
Wellington Anti-Screen
Wellington Film
Wellington Speedy
Wellington Iso Speedy

Class 1 1/4, P. E. 90, Wy. 180, Wa.
Central Comet
Cramer Banner X
Cramer Instantaneous Iso
Cramer Isonon
Cramer Spectrum
Defender Ortho
Defender Ortho, N.-H.
Eastman Extra Rapid
Hammer Extra Fast Ortho
Hammer Non-Halation
Hammer Non-Halation Ortho
Seed 20x
Seed C. Ortho
Seed L. Ortho
Seed Non-Halation
Seed Non-Halation Ortho
Standard Extra
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.
Cramer Anchor

Lumière Ortho A
Lumière Ortho B
Class 2, P. E. 78, Wy. 120, Wa.
Cramer Medium Iso
Iford Rapid Chromatic
Iford Special Rapid
Imperial Special Rapid
Lumière Panchro C

Class 3, P. E. 64, Wy. 90, Wa.
Barnet Medium
Barnet Ortho Medium
Hammer Fast
Seed 23
Wellington Landscape
Stanley Commercial
Iford Chromatic
Iford Empress
Cramer Trichromatic

Class 5, P. E. 56, Wy. 60, Wa.
Cramer Commercial
Hammer Slow
Hammer Slow Ortho
Wellington Ortho Process

Class 8, P. E. 39, Wy. 30, Wa.
Cramer Slow Iso
Cramer Slow Iso Non-Halation
Iford Ordinary
Cramer Contrast
Iford Halftone
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.
Lumière Autochrome

OUR ILLUSTRATIONS

Edited by WILFRED A. FRENCH

The story of the artist whose portraits adorn this issue has been told briefly by the well-known critic, Sadakichi Hartmann; but the amount of mental effort expended by Mr. Hutchinson to make of himself the successful interpreter that he is, has not yet gained publicity. Yet it is no secret that at first the artist's technical equipment was not on a par with his artistic ideals. So he worked assiduously, progressively, never surrendering his individual ideas of expression and interpretation until he had mastered technique. Unfortunately, with some, a highly-developed technique means more than the presentation of character the revealing of what is within. But though the Editor is familiar with the circumstances of Mr. Hutchinson's rapid artistic development and progress, he prefers to go no further, and refers the reader to Mr. Hartmann's admirable estimate of his subject's accomplishment. Data: equipment and materials *ad libitum*; but as to the lens, it was the Smith Soft-Focus Semi-Achromat.

The views of Pittsburgh, as pictured on page 274, by William H. Wolf, constitute that part of the city known as the "Golden Triangle," and the masses of soaring architecture, with the Monongahela River in the foreground, suggest the appearance of New York above the Battery. That a Lilliputian camera is eminently suited to the taking of very high buildings, is shown by the vertical lines and excellent perspective of these pictures. Data: Goerz V. P. Tenax; Celor lens; U. S. 4 stop; $\frac{1}{25}$ second, tank-development; pyro-metol-acetone; Cyko Normal Glossy.

Among Boston's discriminating camera-enthusiasts is the author of the attractive examples of miniature equipment work, by Sherwood Hall, Jr., page 275. His photographic ardor is expended upon home-scenes, including the antics of the first and "only" baby, whose portraits are reserved for publication in another issue of PHOTO-ERA. The little pictures evince the joy of picture-making, and, incidentally, friends get acquainted with the tasteful arrangement of the little home built and equipped for a small but growing family. They also serve to show the adaptability of the little Tenax to work just as this. The tiny camera rests, unostentatiously, on the piano, a taburet, a window-seat, or even on the breakfast-table, ready to be picked up and released at a propitious moment. Data: Goerz V. P. Tenax; Dagor lens; Wellington Anti-screen Backed; Rodinal; tank-development.

As an animal character-study and enlargement of a V. P. Tenax negative, the picture by Mr. Hall, page 276, is a convincing success. (On account of his unreliable good-nature, the dog had to be sent away.) Data: same as preceding.

The attractive portrait by W. B. Cline, page 277, is obvious proof that miniature cameras are admirably adapted to home-portraiture. The picture was made hastily to prove the success of the experiment—soft, yet clear delineation, correct proportions and ample detail. Data: Vest-Pocket Kodak, Eastman N. C. film, tank-development.

The two pictures, page 278, illustrate how successfully enlargements can be made from Ica Atom negatives. The upper one depicts a group of New York "sky-scrapers," the Park Row Building at the extreme left, with the Brooklyn and Manhattan bridges in the distance. The lower view of New York presents a long

group of the city's tallest structures—at twilight—the Singer Building overshadowing them all. Someday an imaginative writer will liken a comprehensive view of Lower Manhattan, with its many-crested skyline, to a Swiss mountain-range, designating the various pinnacles as "Mt. Singer," "Mt. Woolworth," "Mt. Metropolitan," "Mt. Trinity," etc.

One of our guilders, Norman Lihon, of Alberta, B. C., has taken his camera into the remote wilds of British Columbia and sent us several prints which depict the grand Alpine scenery along the Fraser River. One of these thrilling views appears on page 279. No data.

The work of William Shewell Ellis, an energetic, progressive artist of Philadelphia, has been the subject of admiration in America and Europe. As if fame were not enough, Mr. Ellis has captured the grand prize in the Eastman Kodak Competitions many times. "He's got the habit," as they say. He manages to impart a vivacious charm to his portraits that is distinctive; but, as he is a rapid worker before the camera, he has been known to slight his technique, which probably would account for the apparent exaggeration of the hand in the lady's portrait, page 281. No data.

The very attractive young woman, pictured on page 284, is the model of a large number of artistic figure-studies, nude and draped, which constitute a number of portfolios published by the Aurora Studios, Boston. An advertisement of these life-studies will be found in the advertising-section of this issue. These photographs were made by an experienced artist, whose mastery of photographic technique is exemplified in this pleasing genre. He uses an ordinary equipment, the lens being an unnamed rapid rectilinear.

One of the sights of modern Rome is the Cloisters of San Giovanni, in Laterano, page 285. Photographs of this architectural gem are popular with picture-lovers, although the original of our illustration is a direct carbon print from an 11 x 14 negative made on the spot by a professional. No data.

The fund of home-scenes to be recorded by the camera is virtually inexhaustible, and new themes, like the one depicted on page 286, are constantly meeting the observant eye. But however irresistible the desire to seize the camera and perpetuate a fleeting picture, an eye should be had for the immediate surroundings, so that possible inharmonious accessories and patches of light may be taken care of. The casual observer may not notice that in this picture the mass of light-filled drapery is artistically detrimental to the otherwise pleasing and well-executed composition, which deserves to be prized as a souvenir of happy days—with many, many more to follow. Data: February, 1.30 p. m. bright; 5 x 7 Korona camera; 12-inch Rectographic lens; stop, F/16; Isos. No. 3, 5-times color-screen; reflector used in brightening shadows; 1 second; Cramer Inst. Iso; pyro, diluted; Professional Cyko print.

The Swiss landscape-photographer *par excellence*, G. R. Ballance—recently established at San Mamette, Lake Lugano (the Italian section)—occasionally takes his camera into neighboring countries and brings back a collection of prizes, such as the view of the Palatine Hill, Rome, page 287. The delightful atmospheric quality of his prints is due largely—as he himself, asserts—to the character of his printing-medium. Data: 8/4-

inch Goerz Dagor; stop, F/32; 6-times color-screen; Oct., 11 A.M.; weak sun; 3 seconds; 5 x 7 Ilford Slow Iso plate; pyro-soda; C C Platinotype print.

In the portrait of F. G. Quimby, a Boston landscape-painter, the photographer has rendered the color-values and the physical proportions with artistic success, page 288. The simplicity of the composition and the forceful personality of the subject also claim our admiration. With the portrait, published in January PHOTO-ERA, the present portrait gained for the photographer, W. H. Partridge, the only prize — a large, silver loving-cup — offered by the Wollensak Optical Co. Data: 8 x 10 studio-camera; 8 x 10 Verito lens used wide open; Cramer plate; pyro.

The question of improving the negative is largely a personal one, as has been stated with undisguised candor by Clara Weisman, the expert photo-etcher, whose article appears on pages 292-5. Hence little can be said from an art-viewpoint regarding the accompanying portraits, although Miss Weisman is a capable photographer and understands the principles that govern artistic portraiture. No data.

Minna Keene, fellow of the R. P. S., and for many years a resident of Capetown, S. A., is a camerist of high repute. Exhibitions of her work have been held lately in London and attracted considerable and well-deserved interest. Her pictures are distinguished by dignity and refinement from the pose of the subject to the finished print, and the settings of her open-air pictures owe their unconventional character to the picturesqueness of the African country. In "Pomona," page 294, these characteristics are pleasingly exemplified, and one notes also the enhancing suggestion of filtering sunlight.

Students of character-photography have profited by Sadakichi Hartmann's illuminating exposition of the artistry of Helmar Lerski, printed with a series of large plates in PHOTO-ERA, November, 1912. See page 295. The bold, structural work of this innovator in portraiture — lover of striking dramatic effects — created a sensation among all classes of portrait-practitioners at the time, and turned the thoughts of many an ambitious professional in a new direction. Of course, in straight, serious portraiture, the artist found it desirable to curb his spirited steed and set a moderate pace; but the forceful individuality of the horse and rider prevailed — with advantageous results. Data: made in studio without a skylight, the main source of light being a west (side) window, size 6 x 10 feet; 8 x 10 New York Studio outfit; Voigtlander & Son's 14-inch Heliar; 8 x 10 Hammer Red Label; pyro; Artura print.

Wm. Ludlum Jr.'s delightful poem, a veritable summer-idyll, has been admirably illustrated by Howard S. Adams, page 296. It is a case in which art has been fittingly wedded to verse, and although our poet is an equally successful photographer — as has been proved frequently in these pages — he generously invited the collaboration of Mr. Adams. Data: in the open, 4 p.m.; light diffused; Reflex camera 6½ x 8½; Cooke, series II, 10½-inch focus; stop, F/4.5; ½ second; Wellington Anti-screen; Celeritas developer; 4 x 5 direct Studio Cyko print, used middle of negative.

"A Hackneyed Subject!" the Editor hears some one exclaim. Page 297. True this may be; but even the cynic, who believes that it were better for the human race if a mother's love, tempered with judgment, could be extended to the period of the child's discretion, is pleased to see a really artistic representation of this, the noblest of human passions. In this instance the artist, Rudolf Dührkoop, has indicated more the joy, a phase of *Mutterliebe*, although the little one evidently is not in a reposeful — ideal — state of mind. No data.

Mr. Dührkoop uses, however, a Voigtlander (Heliar) and a Zeiss Tessar, according to his fancy; Seed plates, but German printing-medium.

The Photo-Era Monthly Competition

THE Foreign-Travel competition yielded a gratifying number of entries in which interest and discrimination were pleasingly manifest. Not only European countries, but those of the New World were represented in these entries — proof that the camerist is a great traveler, or, if one prefers, that the camera is an indispensable part of the average tourist's impedimenta. Then, too, those who prepared to enter the Foreign-Travel competition usually were familiar with PHOTO-ERA's high artistic standard, and showed judgment and discrimination as to the choice of their subjects. As a source of profit, also, a collection of carefully-selected subjects of foreign-travel, showing excellent workmanship, may often prove of great value; for professional publishers of such work are constantly eager to obtain subjects of striking pictorial beauty, or which show new aspects of well-known landmarks, whether architecture or natural scenery.

If there is such a book as "Glimpses of old Switzerland," W. H. Rabe must have read and profited by it, for his picturesque scene, page 301, is certainly not one of the numerous sights that meet the eye of the ordinary visitor to Switzerland. Nevertheless, the scene is a typical one, as from a thorough travel-experience in the Helvetian republic the Editor can verify. It is a picture replete with interest which culminates in the sunlit corner in the background. The children walking toward the center of the picture form the principal human element in the composition. With true artistic feeling Mr. Rabe disposed of this fascinating little group, and his success in this respect deserves emulation; for many are the times when in similar circumstances the children in the picture have been allowed, or even been asked, to group themselves before the camera and look into the lens. The whole arrangement and treatment of this peasant-theme evinces thorough artistic knowledge and technical capacity. Data: 10 A.M.; sunny; 1 A. Kodak; Eastman N.C. film; ½ second; pyro; bromide enlargement.

That the scenery of Mexico, which is described by sojourners as totally devoid of interest, contains attractive camera-material, if only the sensitive artistic spirit will investigate, is proved by the typical canal-scene pictured by one of our regular subscribers, Señor J. B. Moreau, page 302. It is a well-ordered, easily-balanced and nicely-proportioned picture. The sombreroed figure is well placed, and the entire arrangement might be easily mistaken for a view on a stream in peaceful New England. Unhappy Mexico! No data.

Mr. Murray makes occasional visits to his native country, Scotland. Returning from his last, recent stay, he made a brief stop at Dublin, where he obtained a few interesting exposures of which one is reproduced on page 303. As an accomplished art-student, Mr. Murray understands the value of an interesting foreground, and he never loses sight of this important knowledge which is well exemplified in his view of the Nelson Monument. Data: 4 x 5 Premo, B. & L.; Special Universal lens, 6½-inch focus; Imperial Special Rapid; Amidol; 3 p.m.; ½ second; fair light; Bromo Black Bromide print.

Like nearly every camerist who visits Holland, Mr. Thomas Carlyle has surrendered to the spell of the Dutch girls, with their neat and trim costumes. Those of Volendam, on the Zuyder Zee, seem to take precedence in the affections of discriminating camera-users.

Data: August, 1913; good light; Soho Reflex camera; Goerz Celor; stop, F/6; $\frac{1}{25}$ second; Imperial Ortho (Backed); pyro-soda; 4 x 6 Wellington Matte Bromide.

A hasty glance at Mr. Pertuch's perspective view of the lower part of the New City Hall in Munich suggests the Doges' Palace in Venice. The arches and pillars are very similar, but the arcade is interrupted by the principal entrance, beyond which the row of arches continues. Although there is considerable passing in front of the *Rathaus* during the day, our artist selected a favorable moment when the pedestrians were few. Data: 11 A.M.; bright; 4 x 5 Eastman N. C. film; Voigtlander Collinear; stop, F/8; $\frac{1}{10}$ second; pyro; enlargement, Eastman Royal Bromide.

The Beginners' Competition

REGULAR participants in our competitions for advanced workers are watching the growing efforts of the Beginners with mixed feelings—curiosity, satisfaction, alarm—and not without reason. There is an element of sincerity, freshness and spontaneity in much of this work that is gratifying to the Editor, for it means progress in the direction of higher standards of merit. The interest in this department is growing steadily, and it is to be regretted that there are so few prizes to be distributed, as often the entries are of nearly uniform excellence. Instances where well-known rules in art—composition—are violated or ignored, without marring the result, are quite common, even among artists of high repute. Placing the principal object of interest directly in the middle of the picture-space, for instance, is one of the rules generally to be observed. But when the composition is so balanced, either by form or by light and shade, as not to make the violation offensively obvious, and render the total effect pleasing and harmonious, there is no need of apology—the end justifies the means.

In the case of Warren R. Laity's third-prize picture, page 306, the main pictorial object (the tree) is exactly in the center of the picture-area so far as the lateral sides of the picture are concerned; but the tree, occupying nearly three-quarters of the height of the entire picture-area, is raised considerably above the center and rests upon a base which furnishes an ample and attractive foreground. Besides, the branches of an adjoining tree supply a pleasing diversion, and the adjacent sheet of water becomes a natural foil to the triple-trunked tree. The technique is also praiseworthy. Data: October 10 A.M.; bright sun; $\frac{5}{8}$ -inch Goerz; stop, F/16; $\frac{1}{2}$ second; Stanley; M. Q.; Noko print; Duratol.

The mistake which the author of the preceding picture happily avoided, comes nearer being committed by L. A. Bogart in his very interesting genre, page 307. Here there is nothing to draw our interest away from the children about to ascend the stairway. The ordinary observer is not mindful of the hazardous position the group occupies in the picture-space; but examining the composition critically, he must feel that the newel-post has the effect of pulling the main objects to itself—to the left, and giving the shadowy space, at the right, greater freedom. Whether all this was thought out and planned by the camerist, the Editor has no reason to know; but he is accorded the credit of having produced a picture of sweet sentiment and admirable workmanship. The student should not fail to note the absence of self-consciousness in the subjects, the soft and pleasing modeling in the night-clothes, and the excellence of drawing throughout. The successful production of a picture of this sort is by no means as simple as some may think; only a personal experiment under similar conditions will convince the skeptical beginner. "Bed-

Time" is sufficiently well done to have justified its maker to enter it in the "Flashlight" competition for advanced workers, which closed April 30. It certainly possesses prize-winning qualities. Data: 5 x 7 Premo Camera; B. & L. R. R. lens; stop, U. S. 8; flashlight; No. 3 Eastman powder, divided so that $\frac{3}{4}$ was used as a front light and $\frac{1}{4}$ as a rear (supplementary) light; no daylight used; only accessories, two shoe-box covers and a bed-sheet; Stanley plate; pyro, in tray; 5 x 7 Azo H Hard; for reproduction, Hard Glossy.

L. V. Richard's winter-landscape, page 308, is of uncommon interest and beauty. This picture illustrates the importance of choosing the diagonal view of a river or a road, if the result is to be artistically pleasing. Good judgment has been shown by the camerist in selecting the foreground, which might easily have been an ice-covered part of the stream resulting in a glaring, monotonous stretch. The perspective, atmospheric effect and general feeling of winter have been well portrayed, and the spacing, too, merits words of praise. Data: March, 1914; 11:30 A.M.; sun back of cloud; 4 x 5 A. Graphic; 6-inch B. & L. R. R. lens; stop, U. S. 16; 3-times color-screen; $\frac{1}{2}$ second; Wellington Anti-Screen, backed; Edinol-Hydro; Velour Black print.

The picture of a basket filled with Spitz puppies, page 309, is unusually successful because of the admirable technique exercised by the young artist, W. Stelcik. Extremely white objects exposed to the full force of the sun often tempt inexperienced camerists to give an inordinately short exposure resulting in lack of detail. Here, however, the picture was adequately timed and properly developed. No data except Azo K print.

Good portraits of Woodrow Wilson, the nation's chief executive, are quite rare, and it is, therefore, with pleasure that we present, on page 323, one of his recent pictures that is approved not only by Mr. Wilson himself, but by those who know him personally. The circumstance that the picture is the work of Harris & Ewing, Washington's leading portrait-studio, is also a guaranty of the truthfulness and typical character of the portrait. Only data: made with Wollensak Velostigmat, Series II, F/4.5.

When Times Are Hard

SOME one who is solicitous of the future of the sovereigns of Europe states that if they were obliged to earn their own living, the German Empress, among the number, could more than keep the wolf from the door by engaging in art-photography. In that case we wonder who would be the Royal Imperial Court Photo-Finisher.

The Horrors of War

FEW persons can picture to themselves the actual conditions that exist in Northern Mexico as a result of the barbarous warfare that has been waged there for some time past. The path of the rebel hordes is almost unspeakable in its horror, as revealed by a series of realistic, truth-telling postcards made, on the spot, by several daring camerists. Every phase of this cruel war is pictured in these photographs, of which there are several hundred different subjects. If any one doubt the individual bravery of the Mexican, whether cut down by the enemy's bullet or by the "firing squad," or question the destructive power of the weapons sold to the Mexican rebels by courtesy of the present Administration, he need but gaze upon the mute camera-proofs supplied by the photographers whose advertisement appears in this issue. Our advice to purchasers is to avoid the selection of appalling subjects, if possible.

THE CRUCIBLE

A MONTHLY DIGEST OF FACTS FOR PRACTICAL WORKERS

With Reviews of Foreign Progress and Investigation

Edited by PHIL M. RILEY

Readers are encouraged to contribute their favorite methods for publication in this department
Address all such communications to The Crucible, PHOTO-ERA, 383 Boylston Street, Boston

Universal Developers

IV.—Edinol

This popular agent stands midway between the slow-working developers, such as pyro, hydroquinone and adurol, and the quick-working developers such as metol, amidol, etc. It is clean-working and particularly suitable for developing-papers and lantern-slides. As a universal developer it is best combined with hydroquinone. Edinol does not stain the hands or finger-nails, and is absolutely non-poisonous. Great detail, fine gradation and soft, brilliant highlights with very little tendency toward halation are characteristics. With developing-papers great latitude of exposure is permissible, there is little tendency to fog or stain the prints, and surprisingly good results are had on old or deteriorated paper.

Water.....	5 ounces
Acetone sulphite.....	75 grains
Sodium sulphite, anhydrous.....	225 grains
Edinol.....	30 grains
Hydroquinone.....	15 grains
Potassium carbonate, anhydrous.....	1 ounce

For plates and films, take 1 ounce of stock-solution and 7 ounces of water. The factor is 15 and the time of development at 65 degrees about 5 minutes.

For 30-minute tank-development at 65 degrees, take 1 ounce of stock-solution and 25 ounces of water.

For bromide paper, take 1 ounce of stock-solution and 15 ounces of water.

For gaslight paper, take 1 ounce of stock-solution and 10 ounces of water, adding 1 ounce of a 20-percent solution of sodium carbonate, anhydrous.

Self-Toning Paper Precautions

A SELF-TONING paper is one in which the toning-agent (gold) is contained in the emulsion itself, and becomes active when the print is placed in a bath of hypo in which it both fixes and tones at the same time. Now it is only common sense to carry out this process with at least the same regard to consequences which is paid in the manipulation of ordinary P. O. P., writes "Practicus" in *The British Journal of Photography*. Yet I am afraid that the emphasis which is laid upon the extreme simplicity of self-toning paper by the manufacturers is an inducement to the user to neglect what are really important precautions. The chief of these is to avoid acidity of the hypo-bath. You would avoid this in fixing ordinary P. O. P. Why not equally in the case of self-toning paper, which essentially is of the same class? The acid, of course, comes from the paper itself, some form or other of organic acid being a fairly general constituent of the coating in the case of such papers. If you put the prints directly into the hypo-bath without washing or with insufficient washing,

you add acid to the latter, just as directly as though you weighed the crystals on a scale-pan and put them in the solution. And acid in the fixing-bath is a positive cause of impermanency in the finished print.

Therefore, the course to follow is to make it a rule to wash the prints for five or ten minutes in running water, or several changes, before placing in the hypo-bath. If the maker's circular instructs you to place directly in the bath without washing, it is better to ignore it. You may not get such a good tone, but you will get a tone which depends, as far as the process allows, on whatever gold is in the paper, not upon the spurious toning-action of a hypo-bath which has become acid. There is another way in which the difficulty of acidity may be got over, viz., adding to the hypo-bath some chemical which will neutralize any acid which finds its way in from the paper.

The most usual addition to the hypo-bath for this purpose is sodium bicarbonate (cooking-soda) or ordinary sodium carbonate (washing-soda). The former is the better, because it does not make the bath distinctly alkaline, but is equally effective in neutralizing acid. With some papers the tones obtained in hypo-baths with these additions are not as good, but the remark made above applies here.

The foregoing notes refer to the production of prints of brown or sepia color, tones which most papers of the self-toning class readily give by the use of a hypo-bath. For purple tones, prints, which again should be washed, are placed first in a bath of salt and then, after an intermediate rinse, in one of hypo. I need not deal here with the exact strength of salt- and hypo-baths, since different makers have their preferences. The important point to note is the observance of the rules given above, and these apply also to the use—and a very advisable process it is—of a platinum-bath for obtaining rich, warm-black prints. The platinum-bath is acid, and therefore prints, on removal from it, should be well washed before placing in the hypo, to which latter sodium bicarbonate may also be added. I am aware that so far as methods and formulae are concerned, I have said nothing which possibly the reader did not know before, but I would ask him to note what I have written on the rational treatment of self-toning paper. If he will do so, I venture to think that he will not have to complain of faded prints.

Varying the Size of the Image

If an extremely small stop is fitted to the lens, it will be found that it is possible to get images of very different size from the same standpoint, merely by racking in or out. The extent to which this can be done with an aperture of $F/100$, or thereabouts, will come as a surprise to any one trying it for the first time. Before now it has enabled a wide-angle picture to be obtained with an R. R. lens of the ordinary angle. — *Photography and Focus*.

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Photographers' Association of America

34th Annual Convention, Atlanta, Ga., June 15 to 20, 1914

FOR the first time the National Convention is to be held in the South. This is a good thing for both North and South, and present indications point to the fact that all concerned realize it. The South has developed wonderfully during the past few years, and it is with feelings of pride and pleasure that it extends the hand of welcome to northern photographers.

Rarely has a convention-city offered such attractions. The very trip to it, either by boat or rail, offers a pleasant journey and many things of interest to see. The ocean-trip from Boston or New York to Savannah provides a refreshing rest and change of air for three days each way, thus offering a beneficial vacation as well as the treat of the convention itself. The round-trip fare from Boston is \$41.50; from New York, \$39.50. This includes meals, berth and railroad-fare between Savannah and Atlanta, the traveling-time between these cities being half a day.

If the journey by rail is preferred, rates have been obtained lower than to any previous convention. The list is too long to give in full, but the following are representative of the whole country: Boston, \$39.50; Chicago, \$25.80; Cincinnati, \$15; Cleveland, \$25.50; Denver, \$64.10; Detroit, \$25.50; Indianapolis, \$18.30; Kansas City, \$35.40; Minneapolis, \$42.10; New Orleans, \$15.05; New York City, \$31.50; Philadelphia, \$27; Pittsburgh, \$25.90; San Francisco, \$135.40; St. Louis, \$21.40. These tickets will be on sale June 12 and 13, and are good for the return-trip until June 24. Those who have never been in the South before can, at small extra expense, visit many of the spots made historic during the Civil War. Mammoth Cave is also a point of interest for those passing through Cincinnati.

Several of the many attractions of Atlanta were published last month in PHOTO-ERA. No repetition seems necessary except to emphasize the fact that those who attend the convention need have no fears that they will suffer because of great heat. Atlanta is ten hundred and fifty feet above sea-level at the foot-hills of the Blue Ridge Mountains, where there is always a good breeze. For thirty-four years past the average June temperature has been 76 degrees.

At the time PHOTO-ERA goes to press no definite program for the convention has been announced; but we have the assurance of President Manly W. Tyree that it is to be strictly of an educational character, brimful of practical instruction that can be used to great advantage in everyday work. The working-studio this year is to be better than ever, with well-known photographers as demonstrators. Posing will be by daylight, all standard plates will be used and, by means of the Balopticon, the retouching, etching and all work upon the negative will be carried out in full view of the entire audience. Within thirty minutes all negatives will be turned over to demonstrators of the several paper-manufacturers for printing on various grades and surfaces of paper. Air-brush work on prints will also be a prominent feature.

The talks and lectures will be equal to the best ever given by the Association, including the art- and business-sides of the profession, as well as the technical. It is the hope of the officers also to make the picture-exhibit the finest ever brought together. Three prints are solicited from each exhibitor, and will be passed upon by a jury of three—two photographers and an artist of recognized ability. All pictures submitted will be hung, those rating above sixty-five per cent being placed in the accepted class. No names will appear on any pictures, and the jury will always be present to criticize any print on request. From the accepted class several prints, not to exceed twenty, will be purchased by the Association for a permanent collection, the price being \$25 each.

Pearl Grace Loehr, President of the Women's Federation, announces that the Federation exhibit will be distinct from that of the P. A. of A., yet will come under the same rulings, and accepted prints will be subject to purchase by the Association for the permanent collection. The special feature of the program to be furnished by the Federation will be an exposition and illustration of the art-principles that underlie portrait-composition. Miss Kate Cameron Simmons, of New York City, well known for her important work in the schools of New York and Portland, Ore., will devote one hour each day to this work.

R. W. Johnson, President of the Commercial Federation, has not yet announced his plans, but they are certain to be of value to every commercial man in the country.

Entertainment is being amply provided for so that every man- and woman-photographer in Atlanta, from June 15 to 20, will not lack amusement for every spare moment. Let every progressive photographer in the land make Atlanta his Mecca of the year. The trip there and the convention will be well worth the phenomenally-low cost.

Exhibitors at Atlanta

THE following is the most recent list of firms which will have exhibitions at the National Convention. Others will be represented, of course, but this is the most complete list at the time PHOTO-ERA goes to press.

Allison & Hadaway, New York.
Anseo Co., Binghamton, N. Y.
Barston Co., Cincinnati, Ohio.
Edward Blum, Chicago.
Central Dry-Plate Co., St. Louis.
A. M. Collins Mfg. Co., Philadelphia.
G. Cramer Dry-Plate Co., St. Louis.
H. & W. B. Drew Co., Jacksonville, Fla.
Eastman Kodak Co., Rochester, N. Y.
Carl Ernst & Co., New York.
Forbes Dry-Plate Co., Rochester, N. Y.
M. M. Frey, New York.
C. P. Goerz Am. Optical Co., New York.
Griffith & Schlager, Birmingham, Ala.
Gnndlach-Manhattan Optical Co., Rochester, N. Y.
T. E. Hallidorsen, Chicago.
Hannast Dry-Plate Co., St. Louis.

Helios Chemical Co., Philadelphia.
 Memphis Photo-Supply Co., Memphis, Tenn.
 Ernst Oeser & Co., New York.
 Quaker City Card Co., Philadelphia.
 C. B. Robinson & Sons Co., Grand Rapids, Mich.
 Schering & Glatz, New York.
 Shoberg Portable Skylight Co., Sioux City, Ia.
 Southern Photo-Materials Co., Atlanta.
 Thos. Southworth & Co., Union City, Tenn.
 Sprague & Hathaway Co., West Somerville, Mass.
 H. C. White Co., No. Bennington, Vt.
 Willis & Clements, Philadelphia.
 Wollensak Optical Co., Rochester, N. Y.

Claudy at Atlanta

AMONG the important features of the Atlanta Convention will be a talk upon "Photographs for Publication," by C. H. Claudy. Certainly with twenty thousand publications in America to sell to, this subject should prove of vital interest, and no man can speak with greater authority. For fifteen years past Mr. Claudy has enjoyed the training of experience which comes to author, editor, journalist and photographic illustrator. His name is to be found in magazines of very varied character, and among photographic writers he is a favorite. If anybody can tell photographers where and how to sell photographs for publication, Mr. Claudy, who practises what he preaches, can do so.

Photographers' Association of New England

At a meeting of the executive board of the Photographers' Association of New England, held April 24, it was voted to hold the next convention on October 13, 14 and 15, 1914, at Copley Hall, Boston, with official headquarters at the Copley Square Hotel.

\$5,000 Loveliest-Women Contest Opens Auspiciously

ANSCO COMPANY'S \$5,000 America's Loveliest-Women Contest opened May the first and, judging from the great influx of inquiries addressed to the home-office and the enormous quantity of entry-blanks demanded by Ansco dealers for distribution to prospective entrants, it has been quite enthusiastically received in all parts of the United States and Canada.

That this contest is probably the greatest photographic contest ever conceived, is the consensus of opinion of camera-users and devotees of photographic art generally,

and the Ansco Company regrets now to be obliged to decline entries from photographers in England and continental Europe.

The success of the Loveliest-Women Contest will be extraordinary, chiefly because the idea of the contest makes a universal appeal—every one knows a lovely woman and is eager to have her beauty perpetuated.

The cash prizes, ranging from \$500 to \$50 for a single photograph—\$5,000 in all—are an attraction, which, combined with the honor and glory of having your work displayed before the world at one of the greatest expositions in photographic history, is a stimulus to ambition and achievement.

Then, too, an exceptional opportunity is given to all professional photographers who desire to make the contest count in their business, through the electrotypeservice offered by Ansco Company. Three artistic, appealing, business-bringing advertisements have been prepared for this month, and electrotypes will be sent free—one to the first three photographers in each city who will write for them and promise to use them in local newspaper-advertising.

Other series will follow, so that each photographer will have an opportunity to run the cuts sometime during the period of the contest, if he does not succeed in obtaining one of the first three.

Other equally helpful features will be announced from month to month as the contest progresses. If you have not procured *your* entry-blank—if you have not prepared to make the most of the opportunities the contest affords—see your Ansco dealer right away, or write Ansco Company, Binghamton, N. Y., for full details.

London Salon Entry-Blanks

READERS of this magazine who intend to submit prints for exhibition in the London Salon of Photography may save time by writing to the office of PHOTO-ERA for entry-blanks. They will be mailed upon request as long as the supply lasts for a two-cent stamp. The last day for the receipt of prints by the agent in London is Wednesday, August 19, 1914.

The Ground-Glass for June

OWING to sudden and unforeseen changes in the make-up of the eight-point section of this issue the department "On the Ground-Glass"—although complete and ready for the press—is omitted. It will reappear in the July issue.

1914 Convention-Dates

<i>Association</i>	<i>Place</i>	<i>Date</i>	<i>Particulars of</i>
P. A. of A.	Atlanta, Ga.	June 15 to 20	John I. Hoffman, Beyrus, Ohio
Indiana P. A.	Winona Lake, Ind.	July 6, 7, 8, 9, 10	Otto Sellers, Muncie, Ind.
P. A. of Illinois	Peoria, Ill.	July 14, 15, 16, 17	Roger H. Hostetler, Ottawa, Ill.
P. A. of Canada	Toronto, Ont.	July 21, 22, 23	
Ohio-Michigan P. A.	Cedar Point, O.	Aug. 4, 5, 6, 7	J. H. Brubaker, Grand Rapids, Mich.
P. A. of Wisconsin	Milwaukee, Wis.	Sept. 1, 2, 3	
P. P. A. of Missouri	St. Joseph, Mo.	Sept. 8, 9, 10, 11	
P. A. of Kansas	Newton, Kans.	Sept. 22, 23, 24	Helen J. Francis, 612 Kansas Ave., Topeka, Kans.
P. A. of N. E.	Boston, Mass.	Oct. 13, 14, 15	Geo. H. Hastings, Newtonville, Mass.
P. A. of Texas	Waco, Tex.	Nov. 10, 11, 12	A. M. Howse, Ladonia, Tex.

BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices.

ALONG FRENCH BYWAYS. By Clifton Johnson. Illustrated with original photographs by the author. Price, 1.50 net. New York: The Macmillan Company.

To the serious traveler a standard guide-book is indispensable, but inadequate as a means of thorough preparation. Hence he who desires reliable knowledge of French country-life should peruse Clifton Johnson's volume. Here we have a delightful narrative of tramping among some of the smaller towns, rural villages, the fields, the country-land. It is a book of nature, of humble peasant-life intermingled with chance personal experiences. With pen and camera Mr. Johnson has depicted typical scenes, also the simple and primitive ways of the people, and, in the description of Barbizon, discloses his profound admiration of the genius of Millet and Rousseau. In the course of his wanderings in France, Mr. Johnson visits Normandy (Mont St. Michel and St. Malo); Barbizon; Fontainebleau; Domremy (the girlhood-home of Joan of Arc); the Rhone Valley; Chamounix and Mont Blanc; Lourdes with its famous miracles; Poitiers (in search of the famous battle-field), and numerous little hamlets unknown to fame, yet filled with quiet, human appeal. The photographs are truthful, spontaneous portrayals of actual conditions—scenery, life and characters, and show a sympathetic master-hand. Rarely has the camera proved so successful an interpreter and invaluable aid, as in the case of Clifton Johnson's travel-stories.

LOVE IN A HURRY. By Gelett Burgess. Illustrated. Price \$1.25 net. Indianapolis: The Bobbs-Merrill Co.

The old farce, "Fun in a Photograph-Gallery," pales before Gelett Burgess's imitatively humorous story, "Love in a Hurry." Here the author of "The White Cat," and other mirth-provoking stories, is at his best, weaving with brilliant skill a net-work of embarrassing and surprising situations, aglow with spontaneous, uproarious fun, and never a suggestion of coarseness or vulgarity. The narrative deals with the love-affairs of a young and popular society-photographer, who is more of an enthusiastic devotee of the camera than he is a business man, and with the aid of a devoted, resourceful assistant of the opposite sex, just manages to keep up appearances. His amorous entanglements—due to the prospect of a large inheritance, which impose upon him the necessity to marry before midnight of the very day he receives the glad news—are the subject of a series of novel and exciting episodes, and enslave the reader from the moment he has devoured the first few pages. It is a story of interest to every photographer, be he amateur or professional, and its perusal will be a positive benediction to all.

PHOTO-ELECTRICITY. By H. Stanley Allen, M.A., D.Sc. 221 pages. Cloth, \$2.10, net. New York: Longmans, Green & Co.

This is a physical and chemical treatise for students and enthusiasts interested in these aspects of photography. Although the term photo-electricity is em-

ployed in a general sense to designate any electrical effect due to the influence of light, in this book it is used in a more restricted sense to denote a change in the state of electrification of the body produced by the action of light. Thus, the subject is connected in the most intimate way with one of the outstanding questions of modern physics—the nature of radiation. It is possible that further study of photo-electric phenomena will serve to reconcile the quantum or unitary theory of radiation with the accepted undulatory theory of light. Some progress has already been made in this direction, and it would appear probable that the emission of energy in radiation is discontinuous because the emission of electrons is discontinuous.

Not only is the subject of great theoretical interest, but it is connected with questions of practical importance through its relation to photo-chemical processes of all kinds. Special attention has been given to the influence of the character of the light on photo-electric phenomena, and with the theories of photo-chemical action in particular. The view taken by Professor Joly as to the nature of the latent photographic image has been developed, and an attempt has been made to explain the complicated phenomena of photographic reversal.

AMONG ENGLISH HEDGEROWS. By Clifton Johnson. Illustrated with numerous original photographs by the author. Price, \$1.50 net. New York, 64-66 Fifth Avenue: The Macmillan Co.

Lovers of Old England who would experience a taste of true English country-life, and come in closer touch with the town-folk and the people who extract the fruits of mother earth, as well as to meander among the by-paths and hedgerows of rural England, will derive keen delight from a perusal of Clifton Johnson's narrative. It is true that many Americans are quick to feel the charm of the English country, not only because it is so unlike their own, but because it was once their own. It is still, according to one of the literary artists who has ever described it, "Our Old Home"; and the stranger who would form a correct opinion of English character, must go forth into the country, sojourn in villages and hamlets, wander through parks and gardens, along hedges and lanes, loiter about country-churches, and cope with people in all their conditions and all their habits and moods. The author takes the willing reader on many a sight-revealing tramp or excursion, and with rare discernment takes photographs of typical views and scenes, of glimpses of humble homes and firesides, doorways and nooks, so that, enriched with word and picture, he has achieved an accurate and artistic record of English country-life. The tourist who thinks that he has seen the true England, because he has visited London, the cathedral-towns and Shakespeare's birthplace, is seriously mistaken. A perusal of Mr. Johnson's interesting volume will soon convince him of his error, and instill a desire to visit the localities described so graphically and alluringly.

MISSERFOLGE IN DER PHOTOGRAPHIE, UND DIE MITTEL ZU IHRER BESEITIGUNG. Von Hugo Müller. Erster Teil: Negativ-Verfahren (Negative-Methods). Illustriert. Preis: 2 marks (\$48). Vierte Auflage. Halle: a. d. Saale, Wilhelm Knapp.

Here we have another practically-useful volume that will be received with satisfaction by photographic workers, viz., "Failures in Photographic Practice and How to Correct Them." The author is a practical man of recognized authority, and his work in this particular

instance is eminently thorough and comprehensive. Although the practice of photography has been greatly simplified since the advent of dryplates, the inexperienced worker meets his measure of difficulties which—unless he cannot understand and correct them—are likely to lead him astray and eventually discourage him. There are errors in exposure and development; the plate fogs or the film tries to leave the plate; the negative needs after-treatment—reduction, intensification, removal of stain or local defects. If films, there will be similar and additional troubles, all of which have been noted by the author and provided with remedies for their cure. The work, Part I, comprises errors which are frequently met with at every stage of photographic practice, from the moment the exposure is made to the completed negative, including the actual condition of the camera-equipment itself, whether the practitioner be a novice, advanced worker or expert.

ON OLD-WORLD HIGHWAYS—A Book of Motor-Rambles in Great Britain, France and Germany. By Thomas D. Murphy. With 16 color-plates and numerous photographs. Three record-maps. Price, \$3.00. Boston: L. C. Page & Co., 1914.

Mr. Murphy's reputation as a writer of motor-journeys is sustained in the present volume, which is devoted to flying visits to unusual places of interest in Great Britain, France and Germany. This applies chiefly to England and Wales; for the French châteaux-district, Bavarian Tyrol, including Oberammergau with its impressive Passion Play, and the popular Rhine district—though fittingly described in this volume—are familiar to every discriminating traveler. Regarding the value of foreign travel, the author says: "Travel is one of the greatest of educators and civilizers. It teaches us that we are not the only people—that wisdom shall not die with us alone. It shows us that in some things other people may do better than we are doing, and it may enable us to avoid mistakes that others make. In short, it widens our horizon and tones down our self-conceit—or it should do all of this if we keep ears and eyes open when abroad." Of the presentation of the world's greatest tragedy he says: "The majestic spectacle we have witnessed will linger with us so long as life shall last, and it can never be otherwise than a pleasant and inspiring memory." The volume makes a special appeal to motorists. As a member of the motoring party whose impressions he has recorded, the author mentions numerous experiences that autoists will appreciate. The book is written in a bright, conversational style, and the interest is greatly enhanced by the superb color-plates and other illustrations.

HANDBOOK OF PHOTOMICROGRAPHY. By H. Lloyd Hind, B.Sc., F.I.C., and W. Brough Randles, B.Sc. 292 pages. Fully illustrated. Cloth: price, \$2.50 net. New York: E. P. Dutton & Co., 1914.

No text-book on photography has been received with greater satisfaction than this splendid work on photomicrography by two eminent authorities. The subject, of consuming interest to the civilized world, has been treated by Messrs. Hind and Randles in a clear and popular manner. It is an account of the modern methods employed in photomicrography, with a description of the apparatus and processes treated, both from microscopic and photographic points of view. The text includes the photography of small objects, from natural size up to the highest magnifications, stereoscopic photomicrography, kinematomicrography and color-photomicrography. Care has been taken to combine accuracy

with simplicity of description, and the work will prove useful to students of technology and research, medical practitioners and all interested in the application of photography to the microscope. Fifteen chapters treat successively the photographic apparatus; different types of microscopes, their construction, application and illumination; medium and low powers; use of color-sensitive plates; photographic operations, preparation of positives; the various applications of photomicrography to the sciences, including pathology and medical practice (living micro-organisms, blood parasites, culture-tubes, etc.); micro-metallography; stereoscopic photomicrography; direct color-micrography, instantaneous photomicrography. The contents concludes with a complete and well-ordered index. There are eight three-color reproductions of direct color-photomicrographs and innumerable half-tone illustrations, all of high technical excellence. The volume appeals to the amateur, the expert and the scientist, and delightfully fills a long-felt need.

Improved Bird-Photography

WORKERS interested in photographing birds may read with profit the highly-successful method practised by the noted specialist, Guy A. Bailey, and described, together with a series of admirable bird-photographs, in the April issue of *Bird-Lore*, published by D. Appleton & Co.

Mr. Bailey's method consists, firstly, in the use of an electric shutter, instead of the uncertain thread, or the bulb with the cumbersome tubing; secondly, in the use of several individual equipments which are distributed near feeding-stations or perching-places; and, thirdly, in an observation-room from which the birds are observed, and, at the propitious moment, each camera is released. One cannot but admire the originality of the plan, which ensures results that are natural and technically admirable, and for which no apology is asked of the photographer or of the publisher.

A New Camera Club for St. Louis

THROUGH the efforts of a few enthusiastic amateurs of St. Louis a meeting was held Feb. 12, 1914, at the home of Mr. O. C. Kuehn, 3405 Caroline Street, for the purpose of organizing a camera club devoted to the interest and advancement of amateur photography.

The following officials were elected: O. C. Kuehn, president; J. F. Peters, vice-president; Alvin W. Prasse, secretary.

It was decided to call the organization "The St. Louis Camera Club," the meetings to be held the second and fourth Thursday of each month. For information regarding the club, please address the secretary, Alvin W. Prasse, 3149 Shenandoah Avenue, St. Louis.

The Cleveland Photographic Society

AN exhibition of lantern-slides of Mexico was given by the Cleveland Photographic Society at its rooms, 400-402 Cuyahoga Building, Wednesday evening, April 22. Admission by invitation. This is an example of the timely spirit which has animated the doings of this club from the start.

At the regular meeting, held on April 8, seven new members were admitted to membership. The new trustees are: Dr. H. B. Van Tress, chairman; John F. Lewis, Leland C. DeGroot, W. H. Leman, Geo. M. Nisbett, secretary-treasurer. Meetings are held regularly on the second and fourth Wednesdays of each month.

LONDON LETTER

CARINE AND WILL A. CADBY

QUITE a photographic flutter has been caused by the announcement of the Platinotype Company's new printing-paper, *Satista*. All English, and probably most American, photographers are familiar with the name of the old established firm just mentioned. Certainly with us it is a household-word, and one of the present writers used the platinum paper made by them almost from its first introduction, and still possesses, hidden somewhere away amongst other old papers, a wonderful document in the form of a license issued by the Company, which gravely set forth the right of the holder to practise the art of Platinotype-printing. And he did practise that art for many years, and at the present moment does not know where to lay his hand on a more artistic or satisfactory printing-medium than the Platinotype paper of his youth. But the price of platinum has risen enormously, and the cost of the Platinotype paper has naturally gone up with it, and presumably many workers have had to forsake it for a cheaper printing-process. The direct result of this is the introduction by the Platinotype Company of the new paper.

We have just been trying *Satista*. In appearance it is much like platinum paper and is printed until a faint image is seen on the familiar yellow surface in all parts but the highest lights. It is then developed for thirty seconds in a bath made up of oxalate of potash and oxalic acid, after which it is passed through two clearing-solutions of equal strength, ten minutes in each. Then comes a short washing in water, and here we part company with the good old platinum methods, for it is fixed in hypo (two ounces to the pint) for fifteen minutes, after which, of course, a thorough washing is necessary. This completes the process, and we believe only an expert could at a glance detect that the print was not of the ordinary black platinum variety.

The image is somewhat stronger and more on the surface than with ordinary Platinotype; indeed, it is remarkably like Japine, the platinum paper made by the Company for giving minute detail, consequently a less contrasty negative is usable. Issued with the paper are directions for obtaining a variety of warm tones by using what appear to be very simple toning-solutions, but we have not so far had an opportunity to try them. This will, no doubt, prove a distinctly useful and popular printing-process, for it gives a permanent photograph almost indistinguishable from platinum, even to the quality of the paper itself, at roughly half the price. To professionals, who can relegate the monotonous work of passing the prints through the many baths required, it must prove very useful, for the actual printing is extremely rapid. But as amateurs we pray that the inventors will go a step further and discover some means by which a few of those many changes may be safely done away with. Then for all ordinary work we should use *Satista*. We send with this a print just made in this process from one of our ordinary thin, quick-printing child-study negatives taken haphazard from the shelf.

A popular photographic exhibition in London is that of Mrs. Minna Keene in the *Amateur Photographer's* Little Gallery.

Mrs. Keene used to live in South Africa and is now working in Canada, but her exhibits are mostly South African in origin. She has some interesting work here with plenty of local atmosphere, and has made good use

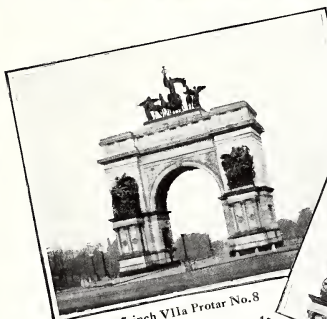
of the strong South African sun to get some striking effects of lighting. Her "Sunshine and Shadows," "Fruit and Sunshine" and "The Charge" (a native boy with a bullock) are good examples. She has, too, some portraits of well-known people: Lord and Lady Gladstone, Dr. Jim, Miss Frances Botha, and one that certainly deserves attention, for it is one of her best, the late Captain Scott, in which she has cleverly suggested the character of the man with all its latent strength and courage. Near it hangs one of the late H. Snowdon Ward in his territorial uniform with field-glasses in his hands. This portrait, to us, was full of associations, for we remembered how keen he had been on this work, and how in his enthusiastic way he had pictured to us his camp-life. It brought back to our minds, too, the glorious summer-day he had brought Mrs. Minna Keene to see us, when we had busily discussed doing photographs of each other, and how the afternoon had slipped away in pleasant talk and no one's camera had been used at all. But to go back to Mrs. Keene's exhibition. She has four charming photographs of children, and one wishes that this group, placed in a corner of the room, had been larger, for her rendering of youth is very sympathetic. There is only one jarring note in this show, and one cannot but wonder how such an artist, who proves by her work that she has a keen appreciation for the correct rendering of values, should sign her name in what looks like ink on her print—not on the margins, but actually on the photograph itself.

The London Salon of Photography has just sent around its syllabus and entry-forms, which moves us to remind our readers that it is not too soon for intending exhibitors to be thinking out their work. The London Salon gets some of its best pictures from the States, so PHOTO-ERA readers, please prepare! This is our premier show of pictorial photography, and to have had our work hung on its walls means that we have attained to a certain position in the photographic world.

We hear that the London Salon has elected two new members: Mr. Marcus Adams, of Reading, and Mr. Harold Crawford, of Leeds. Mr. Adams is known for his child-studies, and we well remember some of his excellent light-toned subjects against a white background, successfully rendered in the oil-process—by no means an easy task. The last sending-in day for the London Salon is August 19.

There may be another interesting item to report about the Salon in our next letter, arrangements for which are not quite complete; so it behoves us to be discreet.

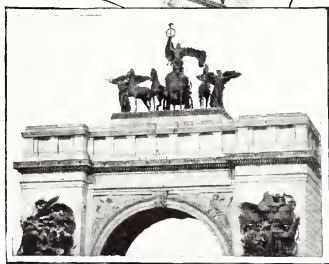
Mr. Burlingham, the man who kinematographed the Matterhorn, Mont Blanc and the Crater of Vesuvius, has written a book called "How to Become an Alpinist," which was published last week by T. Werner Laurie, Ltd. Most people in this country have seen his kinematographs of the Matterhorn, which are a refreshing relief after the usual distressingly-vulgar dramas that seem, somehow, still to appeal to a big public; and one naturally turns to his book for good mountain-photographs, as there is much in it about the kinematographing of the Matterhorn and Mont Blanc. But the photographs in the book are somewhat disappointing. Certainly there are exceptional and intimate views of peaks and crevasses, pictures that never could have been got on the foothills. Where they fail is in the placing of the figures, which in almost every case stare at the camera. It does not seem to matter if they are clinging to a precipice, perched on a dizzy peak or posing on the top of Mont Blanc, they uniformly gaze at the camera. This, somehow, detracts from the grandeur of the surroundings, and one feels at once that these self-conscious attitudes are not natural, and in face of



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the strenuous work and great effort are, in fact, absurd. But it bears out our contention, contained in our letter a month or so back, that somehow or other human nature cannot help posing when confronted with a camera, even if it be on the summit of Mont Blanc.

[The Cadbys send one of their characteristic genre-studies of children, showing at once their sympathetic treatment of child-life and the splendid qualities of Satista paper. — *Ed.*]

The Switzerland of Camerists

THE term, *Switzerland of America*, although now loosely used, refers really to the mountainous region of the New England states — Maine, New Hampshire and Vermont. American camerists who have visited the garden-spots of Europe declare that, as regards scenic beauties, climate, travel-facilities and excellence of accommodations, this region of New England richly merits the distinctive title bestowed upon it by its admirers. The popularity of America's Switzerland has been steadily growing of recent years, necessitating an increase in the number of hotels and boarding-houses. Camerists, in particular, appreciate the wealth and variety of the picture-material found there at every hand. Maine, with its rock-bound coast, innumerable islands of fascinating beauty and quaint old fishing-towns, draws painters and photographers from all parts of the country; and in the lakes of Maine one may fish throughout the summer for black bass. Persons who are yet to experience a restful and profitable summer in this delightful region should send for a copy of "New England Vacation-Resorts," mailed free from Room 15, North Station, Boston, U. S. A.

Kodak Advertising-Contest

THE list of awards in this notable contest for 1913 was published in PHOTO-ERA for March. The brochure of reproductions of the prize-winning prints is now at hand, and a most interesting and beautiful collection it presents. Moreover, each tells a convincing story of one of the charms of picture-making with the camera. The brochure is intended primarily to suggest the sort of pictures that are desirable for advertising-purposes, and prospective contestants in the 1914 contest will do well to procure a copy of the nearest Kodak dealer. If he cannot supply you, write direct to the Eastman Kodak Company, Advertising-Department, Rochester, N. Y., enclosing a stamp for return-postage.

Garó's Gum-Prints

THE season's concluding art-exhibition at the Boston Art Club, held May 11 to 25, consisted of a one-man's exhibition — a collection of fifty gum- and oil-prints by John H. Garó, of Boston. These pictures exemplified the highest level of artistic expression and technical skill to which this difficult printing-process has yet attained, and proved a veritable sensation among the artists and cognoscenti of Greater Boston. The professional critics, in particular, were enthusiastic in their recognition of Mr. Garó's artistry, and displayed remarkable acumen in their analysis of the pictures, the character and possibilities of which are not generally understood, and proved a revelation even to eminent artists of the brush.

We have spoken so frequently of Mr. Garó's mastery of gum-printing, that our readers might be interested in an opinion from another source — from the daily press. In his review of Mr. Garó's exhibition, William H. Downes, art-editor of the *Boston Transcript*, writes:

"As Mr. Garó is an artist, there is no question about his prints being works of art, since his medium is no more mechanical than another. It all depends upon the man behind the camera. About eighty of his recent works are shown, most of them in black frames; they embrace many portraits, a few groups, some landscapes and even one or two pieces of still-life. Mr. Garó is a painter as well as a photographer, and he takes the liberty to manipulate his plates as he pleases, sometimes making several superimposed printings to get a desired effect. This may or may not be regarded as legitimate by photographic purists: to us the proof of the pudding is the eating. Mr. Garó succeeds in the making of a pictorial effect that has style and charm, and his success is a sufficient vindication of his means.

"His portraits are particularly artistic in composition, lighting and rendering of character. Much attention is paid to the background. In the selection of the pose or movement it is evident that the individual bearing of the sitter is considered thoughtfully, and this personal attitude helps wonderfully in throwing light upon the idiosyncrasies of the subject. At the same time there is no apparent straining for originality in this respect, and the composition is usually so simple that attention is directed to the essentials that count in a likeness. Many of the portraits recall, in one way or another, the manner or style of some celebrated portrait-painter — a point which merely goes to show that the artist is familiar with the work of the great portraitists and uses freely their devices of design when they fall in harmoniously with the particular object he has in mind.

"Again, he is not without the pictorial imagination which is equally requisite to the make-up of an artist. A generation ago it would have been considered absurd to hint at the possibility of a photographer possessing pictorial imagination. It would have been pointed out that his process was entirely mechanical, and that any creative artistry was out of the question in photography. *Nous avons changé tout cela!* It needs only a glance at some of Mr. Garó's prints to prove that the beauty of their design, light and shade, color, atmosphere, and even their sentiment, is purely a subjective affair; and the inference is plain that when a man has the creative impulse he can surmount all the difficulties of his process and express his own temperament and ideals."

Ideal Photographic Instruction

CAMERISTS who intend to pass the summer or their vacation in New England — taking advantage of the offer of the Boston & Maine Railroad, advertised in this issue — and are eager to enrich their knowledge of artistic photography, may profit by the pleasant experience of Mary Carnell, of Philadelphia, at Seguinland, Me., where Clarence H. White, the distinguished pictorialist, conducts a photographic summer-school, from July 6 to August 22.

Miss Carnell has a sincere admiration for Mr. White's artistic genius, his lofty ideals and inspiring personality. Like other eminent workers who have yielded to the spell of "Seguinland," she acknowledges that she has derived material benefit from the brief summer-course conducted by Mr. White on the island which is really his summer-home. She waxed enthusiastic in referring to the natural beauties and other attractions of this locality, which she described as a haven of rest and an inspiration to the sensitive artist. The rocks, the woods, the fields, the birds, the flowers, the water — all form soft, rich harmonies that ravish the senses. It is an ideal spot for the student of the brush or of the camera, and conduces to spontaneous, gratifying activity.

WITH THE TRADE

The Speed of the Zeiss-Tessar Lens

THE Bausch & Lomb Optical Company informs us that its electrotyper occasionally makes a slip-up, and this time it calls attention to its advertisement of the Zeiss-Tessar published in last month's issue. It took only the dropping-out of a period to transform the speed-rating of the Ic Tessar from F/4.5 to F/45, and likewise the speed of the IIB Tessar from F/6.3 to F/63.

No doubt most of our readers recognize this as a typographical error; but we wish to take this opportunity to invite attention again to the advertisement and to suggest that they write to the Bausch & Lomb Optical Co., Rochester, N. Y., asking for a copy of the booklet, "What Lens Shall I Buy?" which describes the Tessars mentioned in the advertisement.

Ensign 1914

IN the nine years that it has been known to American camerists the word *Ensign* has stood for high quality and dependability. Ensign films were first imported, to be followed by Ensign cameras. The complete line, as now handled by G. Gennert, of New York, Chicago and San Francisco, is one of the most important in the trade. Ensign films are too well known and too highly appreciated to require any more extended mention here than the assurance that the excellences of former days have been maintained. Of cameras there are forty, ranging from the \$6 Ensignette, of vest-pocket proportions, to the \$80 cinema-camera for motion-pictures. Folding film-models in many sizes predominate and a sturdy, well-designed and well-constructed lot they are. For plates, there are the Klito, Sylvax, Sylvest Focal Plane Post-Card, Ensign Focal Plane Press and the Duchess cameras, the latter a miniature focal plane camera. Several reflecting-cameras of folding and box-form may also be added to the list. It is an excellent and varied line for a retail dealer to stock and for a camerist to choose from. The 1914 catalog may be had on application, and every reader of PHOTO-ERA should have a copy; it will prove a revelation.

A New Kodak Catalog

THE 1914 Kodak catalog is out. Attractive as ever throughout, the attention is first held by the cover-design, a reproduction of the Second Grand Prize Print, in the recent Kodak Advertising-Contest, by E. Donald Roberts. Turning to the pages within, most of the familiar models of this important line are seen to have been continued, the No. 2 and No. 3 Bull's-Eye Kodaks apparently being the only exceptions. These have been replaced by Nos. 1 and 1A Kodak Junior — two attractive new models intended for the production of a high class of photographs at minimum expense. The picture-sizes are $2\frac{1}{4} \times 3\frac{1}{4}$ and $2\frac{1}{2} \times 4\frac{1}{4}$ respectively, and the prices \$7.50 and \$9.00. In appearance they resemble the well-known F. P. K. models, but the construction is simpler. These, like all other folding Kodaks this year, are provided with cable-release instead of pneumatic bulb. Anastigmat lens-equipments for all models are reduced in price. The Kodak Magnesium-Ribbon Holder was referred to at some length in PHOTO-ERA for May.

Premo Cameras

A NEW and attractive catalog of Premo cameras is now ready for distribution and may be had of dealers throughout the country. This sterling line of plate and film-pack instruments continues almost unchanged and, as in the past, will appeal strongly to discriminating purchasers. We notice the omission of Film Premo No. 1 in the 4 x 5 size and that the well-known Empire State view-camera models have been improved and are now known as the Eastman View Nos. 1 and 2, the No. 1 model being sold at a material reduction in price. This instrument is finished in mission style with black bellows and oxidized metal parts. It has double extensions, and both front and back are actuated by rack and pinion, so that the camera may be focused from either end, or the back racked up close to the front for wide-angle work. The rising and falling front is actuated by a rack and pinion, there are both horizontal and vertical swings and the back is reversible and provided with a vertical cut-off board so that two negatives may be made on one plate if desired. A strap-handle and a plumb-level are provided, and an automatic bellows-support which prevents sagging of the bellows at any time.

Reduced Voigtlander Prices

VOIGTLÄNDER lenses are now sold with due regard to the new tariff, according to the revised list just received from the American office of Voigtlander & Sohn, 242-244 E. Ontario St., Chicago. The cost of an anastigmat lens is now so little that every camerist of serious intentions and anxious to excel in technique should own one. Why not send at once for the latest Voigtlander catalog and study the claims for the Collinear, Heliar and Dynar? Every one of these claims will be made good by the lens itself.

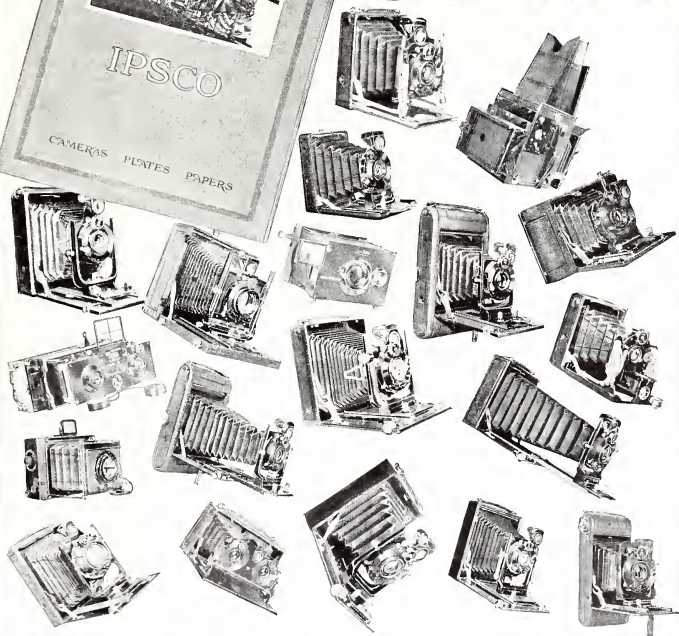
Victor Wins

WE are informed that the Victor Animatograph Company, of Davenport, Iowa, has won its suit against George W. Bond, of Chicago, for infringement of the patent on stereoscopes granted to A. F. Victor, May 27, 1913, and bearing the number 1,062,622. The patent broadly covers a stereopion supported on a single base and also the idea of converging carbons, carried in the rear end of its cylindrical casing.

Ernemann Cameras

IT is with pleasure that we direct the attention of our readers this month to the advertisement of the American agents of Heinrich Ernemann, Dresden, Germany, the Ernemann Photo-Kino Works, 114 Fifth Avenue, New York City. The varied and extensive line of Ernemann cameras is already favorably known to many readers of PHOTO-ERA, and to others we suggest the request of a catalog of the agents or a personal call upon the local dealer carrying this line. Whether a camera of folding- or reflex-type is desired, for roll-films, plates or film-packs, also including the stereo-type, it will be found in the catalog, and actual examination of the instrument will demonstrate its clever design and sterling workmanship.

ICA CAMERAS



SOLE U.S. DISTRIBUTORS
International
- PHOTO - SALES - CORPORATION -
235 Fifth Avenue
New York

When Ordering Goods Remember the PHOTO-ERA Guaranty

ASSUR COLORS

FOR

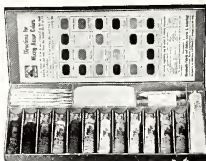
COLORING PHOTO-PAPERS and PHOTOLOID

Far Superior to Oil-, Water- and Aniline-Colors — Simple Method — Economical
Transparent and Absolutely Permanent

ADDRESS:

Schering & Glatz

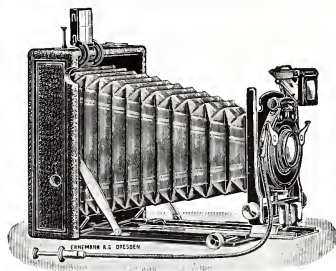
for circular



150

MAIDEN LANE

NEW YORK



INFINITE PLEASURE IS HIS WHO OWNS AN **Ernemann Camera**

BECAUSE THEY ARE BUILT TO DO
WHAT YOU WANT

ALWAYS READY—LEAST AMOUNT
OF BOTHER

LIGHT IN CONSTRUCTION

HANDSOME IN DESIGN

PRICES TO SUIT EVERY PURSE

Send us ten cents in stamps to-day and we will forward our
Illustrated Catalog, descriptive in every detail of our products

ERNEMANN-PHOTO-KINO-WORKS
114 5TH AVENUE **NEW-YORK** 114 5TH AVENUE

Quality Oil-Colors

SINCE the publication of Lehman Wendell's article on "Coloring Photographs with Oil-Colors" in PHOTO-ERA for January, 1914, many photographers have given the method a trial, and have found in every case that effects impossible with watercolors were easily obtainable. Of course success depends in large measure upon the quality of the colors adopted. In this respect those who choose Devoe & Raynolds colors will make no mistake. They are made from carefully-prepared pigments of firm consistency and fine texture thoroughly incorporated with the purest oil. The variety of colors in both single and double tubes is almost endless, and the supply of brushes for use with them meets every possible requirement. A complete catalog will be sent upon request to F. W. Devoe & C. T. Raynolds Co., New York City.

Snapshots by Lamplight

SEND a line to Allison & Hadaway for the new pamphlet of the A. & H. Brand of Marion & Co.'s (London) Record Plate. It contains quite a bit of meat and a number of letters from prominent men who have used this plate. The extraordinary speed permits of snapshots indoors and slow snapshots under ordinary household illumination at night.

In addition to the speed-quality of the plate (500 H. & D.) the product is free from fog, will stand any amount of forcing and is of fine grain. Properly shielded from the light during development and not having been overexposed, the resulting negatives are brilliant and evenly balanced as to deposit. The firm offers to send a trial dozen, postage prepaid, at the standard list-price. This is the best way to obtain proper judgment. The development, however, must be carried to approximately 25 to 50 per cent increased density.

The RWK Photo-Printer

THE advertisement of the RWK Company, printed in this issue, shows the simple principle of the RWK machine for printing Velox, Argo, Cyko and other gaslight papers. One 40-watt tungsten bulb, is used and gives sufficient light to expose any ordinary negative properly in four to ten seconds. Directly back of the tungsten bulb is a 16 candle-power ruby-bulb, which lights alternately with the printing-light by a snap-switch. Note the space between ground-glass and clear glass or negative-support, and the even distribution of light over the entire printing-surface or the capacity ($6\frac{1}{2} \times 8\frac{1}{2}$) of the printer. The paper is held in position on the negative by a special clamp that is independent of the cover. The RWK Printer gives results! These, combined with simple construction and great efficiency, make the price within reach of every camera-user.

Noko Next Best to Cyko

PROFESSIONAL photographers and photo-finishers whose work has forced them to adopt one of the so-called cheap gaslight papers will be interested in Noko, a developing-paper manufactured by Anseo Company. It is a paper uniform in raw stock and emulsion, and made in three grades: Slow Soft, Fast Medium and Fast Hard. There are also four surfaces: Semi-Gloss, Glossy, Medium Rough (dead matte) and Buff (medium rough, dead matte). It may be had in all stock sizes; also in the usual rolls, for Circuit Camera negatives, and in post-cards.



Copyright, 1914, Harris & Ewing

PRESIDENT WILSON AND HIS SECRETARY
PHOTOGRAPHED WITH A VELOSTIGMAT

G. Gennert in Boston

THE well-known firm of G. Gennert, of New York, with offices in Chicago and San Francisco, has extended its activities to Boston. Mr. Leon H. Caverly has been assigned to the New England territory with an office at 31 Milk Street, where all orders will have prompt and careful attention. Mr. Caverly will also call upon the New England trade frequently to show the splendid line of Ensign cameras and films, Montauk bromide papers, Hauff developers, many novelties, and a line of standard photo-supplies.

The Ideal Portrait-Negative

IN his article devoted to this subject on page 283 of the present issue, Mr. David J. Cook refers briefly to several processes of chemical after-treatment often resorted to for the purpose of improving portrait-negatives before attempting to print from them. Regular readers of PHOTO-ERA may refer to page 75 of the August issue, 1913, to another article by Mr. Cook in which he gives minute directions regarding these processes.

Victor Animatograph in New York

WE are advised by Mr. S. G. Rose, sales-manager of the Victor Animatograph Co., of Davenport, Ia., that the New York City sales-office was moved to Room 711, Longacre Building, northeast corner of Broadway and 42d Street, on May 1. There New York patrons may be convinced of the superior qualities of the Animatograph, its efficiency, light weight and compactness.

The Wollensak Vinco Anastigmat

THOSE of our readers who are interested in a high-grade anastigmat lens at a very reasonable price should write to the Wollensak Optical Company for an illustrated booklet, describing their Vinco Anastigmat, and advertised in this issue. It is a rapid-working, perfectly-corrected anastigmat lens, guaranteed to give satisfaction, or it may be returned without obligation by the purchaser. The Wollensak catalog, describing this lens and the complete line of Wollensak products, is now ready and will be mailed free upon request.

The Ensign Folding Reflecting-Camera

FOR the discriminating amateur and professional there is probably no better outfit than a reflecting-camera, as he can see the picture right side up until the moment of exposure. The Ensign Folding Reflecting-Camera, advertised in this issue, is undoubtedly a new departure in cameras of this type. The whole box, when folded, is contained in a space of $6\frac{1}{2} \times 6\frac{1}{2} \times 3$ inches—hardly larger than the ordinary hand-camera, yet extending to an exceptionally rigid and efficient reflecting-camera.

The Ensign Focal-Plane Shutter is also noteworthy, as it cannot possibly be over-wound. A single dial permits change of speeds, and the shutter is released by a very slight pressure. These features permit a greater union between the eye and shutter-release than is usual with cameras of this type. The lens is the well-known Carl Zeiss, F/4.5.

The new 1914 Ensign catalog, issued by the firm of G. Gennert, 24-26 E. 13th St., New York, 320 S. Wabash Ave., Chicago, Ill., and 682 Mission St., San Francisco, Cal., will be mailed to readers of PHOTO-ERA free upon request.

The Magic Quarter

THIS is the title of a booklet in which Dr. Malcolm D. Miller tells his personal experiences in using Instanto and Platona papers and in introducing them to his friends. Even if you did not know the difference between developing-paper and Tanglefoot, you would thoroughly enjoy this clever little story. The unique illustrations on the margin of each page by Harris lend a sort of motion-picture accompaniment to the narrative and make it even more amusing. A copy of the booklet will be sent gladly upon request, so long as the edition lasts, by The Photo-Products Co., 6100 La Salle St., Chicago. Mention whether you have accepted the Special Trial-Order and if you saw it in PHOTO-ERA.

Housh Albums and Mounts

EVERY progressive photographic dealer, not already numbered among the nearly three thousand on the books of The Housh Company, should send for the new catalog of 1914-15 styles. It is a handsome brochure, descriptive of a large and varied line, the quality of which is unexcelled. There are mounts and calendars of grace and distinction in a great variety of color and texture. The albums are particularly varied and attractive, the Quick Detachable Loose-Leaf Albums in flexible cloth and leather bindings being exceedingly ingenious. Scrap, post-card and film-albums are also included, the latter one of the best and lowest priced on the market. There are also flexible mounting-papers and stiff boards in great variety, blotting-paper, photo-masks and calendar-pads. In quality, variety and beauty this line deserves the attention of every dealer.

Cooke Lenses Reduced in Price

THE new Cooke lens-catalog, published by The Taylor-Hobson Company, is ready for distribution. This new edition contains some valuable information never before published regarding certain common misunderstandings regarding photographic lenses. The information is written so clearly and concisely that it can be understood by the novice, and the advanced photographer will find these notes interesting, since they throw new light upon one or two old questions.

A considerable reduction is shown in the prices of most Cooke anastigmat lenses, owing to the change in tariff, and we would advise all our readers to send at once to The Taylor-Hobson Company, 1133 Broadway, New York, for a copy of this catalog.

Enlarging-Cyko

THIS is a new product of Ansco Company which presents a new departure in the manufacture of rapid development-paper. The preparation of fast enlarging-paper has not been difficult, but to combine high sensitiveness with quality equal to that of gaslight papers intended for contact-printing has been a problem.

That the experts of Ansco Company have set a high standard in the happy solution of this problem seems to be the verdict of all who have tried the new paper. Enlargements can now be made with this paper which are the equal of contact prints, and in some instances better. This offers a distinct advantage in several sorts of work. For instance, children are fidgety and difficult to photograph; therefore the chances of success are greater if the work be done with a small camera and short-focus lens. With Enlarging-Cyko these small group-negatives can be enlarged with the assurance of print-quality equal to that of large contact-prints.

Those who associate enlargements with prints weak in the shadows and of a generally lifeless character will be pleasantly surprised to see prints on Enlarging-Cyko resembling in richness and depth contact-prints on Professional-Cyko.

Small Cameras to the Fore

THAT the miniature camera is the chief topic of the day, and that a decided revival of stereoscopic interest is now in progress, there can be no doubt. We know it from personal experience, and our daily callers report it to us constantly. Prominent among them, just as this issue was going to press, were H. M. Bennett, of the International Photo-Sales Corporation, and "Stereo" Smith, of the C. P. Goerz American Optical Company. Both gentlemen reported good business, indicating that Ica and Goerz cameras are firmly entrenched in the esteem of camerists and the confidence of dealers. The introduction of small, compact types of stereo-cameras is responsible for their returning popularity.

A Valveless Shutter

CAMERISTS who take pride in their equipment, particularly in the accuracy of shutter-timing, will be interested to know that the Ilex is a valveless shutter and not subject to the inherent troubles of plunger retarding-devices. Instead of a pneumatic regulator a wheel-arrangement is provided, working on the principle of a watch. It cannot vary under any conditions, thus producing that exactness of action so essential to good results in photography. A booklet describing this interesting construction will be sent upon application to the Ilex Optical Company, Rochester, N. Y.

PHOTO-ERA

The American Journal of Photography



JANUARY

1914

15 CENTS

PUBLISHED MONTHLY

BOSTON • U.S.A.

A Picture Every Time the Shutter Clicks

No blanks, no failures, no disappointments
through wrong guessing of distance or loss
of time in getting ready with the

ANSCO V. P.

It's always ready for action when needed,
ever out of sight in coat, vest or hip pocket.



*Send for a copy of "Snap-Shots and
Education," by Elbert Hubbard.*



*Handy, compact and neat.
Can be slipped into the
hip or coat pocket in a jiffy.*

ANSCO COMPANY, Binghamton, N. Y.

PHOTO-ERA

The American Journal of Photography



FEBRUARY

1914

15 CENTS

PUBLISHED MONTHLY

BOSTON · U.S.A.



YOU ARE MINE!

secret unfolded by a native genie in a strange and wonderful land, to the hero of "Giphantie," is now in the hollow of the hand of the American girl shown in this picture.

It is also yours to hold for \$17.50 and just think, the people in the days of Tiphaigne (1760) were willing to part with their last farthing to make his story of "Giphantie" come true.

You can enjoy its reality for almost nothing.

The Anscop book is yours for the asking.

Anscop Company

Binghamton, N. Y.

The whole world is
her's with an

ANSCO

This marvelous amateur camera of professional quality is the crystallization of humanity's fondest dreams.

Fenelon's fable "Un voyage Supposé" printed in 1690 tells of his heart's desire for an

ANSCO

Another Frenchman, Tiphaigne de la Roche, prophesied the advent of the ANSCO, and the

PHOTO-ERA

The American Journal of Photography



MARCH

1914

15 CENTS

PUBLISHED MONTHLY

BOSTON • U.S.A.

Efficiency in the Printing Room

THE efficiency developed by scientific management is the life blood of every business plant today. A cost system is the first step towards ascertaining the best way to produce an article, and the best way is always the cheapest.

The best way sometimes means the use of the best men, the best machinery, and the best raw materials, irrespective of the price. A studio may save the price of an Ansco Printing Machine in a single month. The elimination of waste prints, and the customers gained by using

Cyko Paper

may pay for a whole year's paper bill of any progressive studio.

There's food for thought in this for many photographers.

Send for a copy of **PORTRAIT** and the **PROFESSIONAL CYKO POINTER**.

Ansco Company

BINGHAMTON, N. Y.

PHOTO-ERA

The American Journal of Photography



APRIL

1914

15 CENTS

PUBLISHED MONTHLY

BOSTON • U.S.A.



Nell Gwynne

*Famous beauty of
the Seventeenth
Century*

Your "loveliest woman"
is quite as fascinat-
ing. Through your
efforts she may be
chosen one of America's
loveliest women.



\$5,000 for Photographs of America's 50 Loveliest Women

*AnSCO Company will
present to the world at
the Panama-Pacific
Exposition, San Fran-
cisco, 1915, photo-
graphs of America's
fifty loveliest women.
Camera users of the
United States and
Canada, whether
amateur or profes-
sional, are invited to
make these photo-
graphs. AnSCO Com-
pany will pay the sum
of \$5,000.00 for the
fifty chosen pictures.*

PHOTO-ERA

The American Journal of Photography



MAY

1914

15 CENTS

PUBLISHED MONTHLY

BOSTON • U.S.A.



"WHEN IN THE COURSE OF HUMAN EVENTS"



The No. 3A Ansco Speedex takes $3\frac{1}{2} \times 5\frac{1}{2}$ size pictures, and is equipped with a high-grade Ansco Ana-stigmat lens and Optimo shutter with a maximum speed of 1-300th of a second. The price is \$55.00.

The appearance of an

ANSCO

in the home is a human event of the greatest importance, and even the baby seems to realize it. The picture herein reproduced tells the story of the Ansco in papa's hands. The ANSCO is an evolution from the large, highly specialized Studio camera made for over sixty years by the Ansco Company—the pioneer manufacturers of photo supplies in this country.

The Ansco is, therefore, the amateur camera of professional quality.

The picture shown is one of the prize winners in the Ansco amateur competition of 1913.

ANSCO COMPANY

Binghamton, N. Y.

PHOTO-ERA

The American Journal of Photography



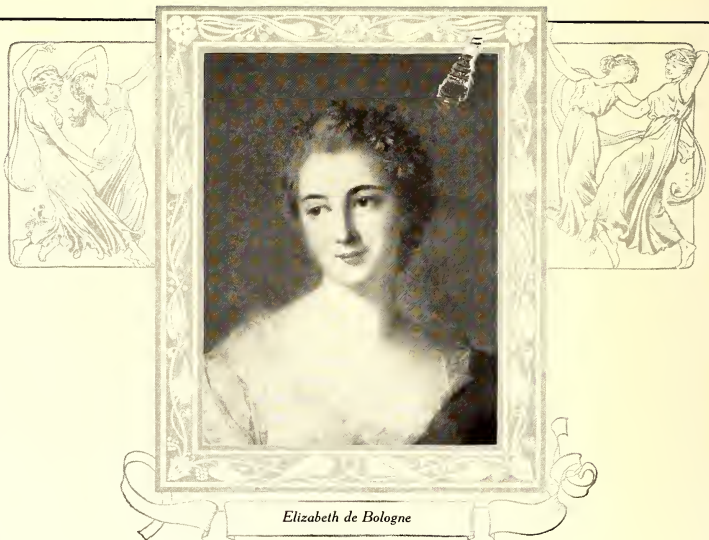
JUNE

1914

15 CENTS

PUBLISHED MONTHLY

BOSTON · U.S.A.



If Louis XIV Had Owned Your Camera

probably the charms of every beauty of the Grand Monarch's days would be as famous as those of fascinating Elizabeth de Bologne. As it is, only a few master portraits remain to immortalize the glories of seventeenth and eighteenth century femininity.

But you, with *your* camera, can help perpetuate the charms of American womanhood. Photograph today the "loveliest woman" you know or else have her picture taken so as to enter it in the Ansco competition for photographs of "America's 50 loveliest women."

\$5,000 in Cash Prizes

will be awarded for the fifty portraits selected as "America's 50 Loveliest Women," by Harrison Fisher, the artist, Minnie Maddern Fiske, the actress, and Alfred Stieglitz, the critic. One portrait will be worth \$500—no winner will receive less than \$50.



No. 3A Ansco Speedex.
Send for Ansco Catalog.

Ansco Company will exhibit this gallery of loveliness at the Panama-Pacific Exposition which opens in San Francisco next February. Entries have been pouring in for three months, but we are still awaiting yours. Call on your Ansco dealer for the very simple details of the contest, or else drop us a line.

This Ansco Contest is *open to everyone* and there are no restrictions as to make of camera, film or paper.

ANSCO COMPANY (Dept. G)
Binghamton, N. Y.

ANSCO COMPANY, producers of Ansco, the amateur camera of professional quality; Ansco color-value film; Cyko, the paper that gives prints of rich, soft quality that never fade, and Ansco photochemicals. Their value in producing superior results has been proven many years.



The Three Strong Links

"A chain is no stronger than its weakest link," and this applies figuratively to all things that are interdependent.

In photography there are three steps that are, and necessarily must be strongly linked—the camera, the plate or film, and the printing medium.

The camera must do the work accurately and efficiently.

The film must catch what the camera sees and projects.

The printing medium must synthetically represent the whole, and in addition the worker's individuality.

The three strong links of photography are represented by the accompanying illustration.

The camera used was an ANSCO—

The negative on ANSCO FILM—
and reproduced from a CYKO print.

AnSCO Company, Binghamton, N. Y.

When Ordering Goods Remember the PHOTO-ERA Guaranty

THE PHOTOGRAPHER WHO USES

CRAMER PLATES

IN HIS STUDIO-WORK WILL

ASSURE

THE EXACT RENDERING OF HIS
ARTISTIC CONCEPTION

WHILE HIS

COMMERCIAL SUCCESS

IS GUARANTEED BY THEIR
CLEANLINESS, SPEED

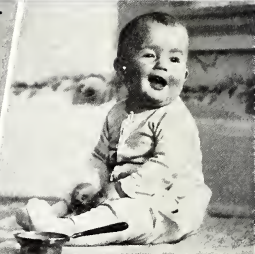
AND

CHEMICAL SUPERIORITY

G. CRAMER DRY PLATE CO. ST. LOUIS, MO.

"EURYNAR"

THE
WORLD'S
BEST



"Wasn't My Fault"

CAUGHT ME IN ONE-TENTH OF A SECOND
INSIDE OF HOUSE WITH RODENSTOCK'S
(MUNICH, GERMANY) F. 5.4 EURYNAR LENS.

YOU CAN DO WHAT OTHERS HAVE DONE.
BUY A EURYNAR, CATCH THE BABY'S
SMILE, THE AEROPLANE IN ITS FLIGHT.

THE EURYNAR DOES IT ALL AND
WELL. SEND FOR PRICES
AND CIRCULARS.

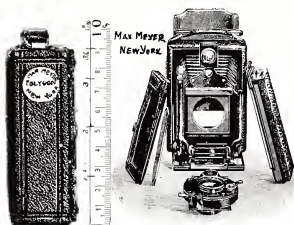


3 Series:
F45-F54-F68

W. J. LAFBURY COMPANY

SOLE AMERICAN AGENTS

305 North Fifth Avenue, by bridge Chicago, Ill., U. S. A.



POLYGON CAMERAS

WITH RIETZSCHEL DOUBLE-ANASTIGMATS

are the embodiment of all that is desirable in cameras. They are compact, small and light in weight, yet they are very reasonable in price. "They fit the pocket." They are made from *Miniature* size up to 5 1/2 inches, in all styles. All are built of light but indestructible metal; all are leather-covered; all have leather bellows; all have rising, falling and cross front; all have detachable lensboard; all have quickly-reversible ground-glass; all are fitted with double anastigmats; the better ones with the finest cemented lenses ever put on the market, in Compound shutter. From \$20 up.

I am also direct
importer of

ERNEMANN

Cameras, Double-Anastigmats and
Motion-Picture Apparatus

Max Meyer 18 West 27th Street New York

Catalog for 10 cents Postage

Dealers well protected

Wellington

PLATES, PAPERS AND FILMS

Manufactured by
WELLINGTON & WARD, Ellstree, England
And at Montreal, Paris, Berlin, Bombay and Calcutta

The New Extreme Plate

H. & D. 400

A plate of extreme rapidity which retains the fine-grain and no-fog qualities which have made Wellington Plates so popular.

SAMPLE DOZEN BY PARCEL-POST

3 1/4 x 4 1/4	.....	\$0.45
4 x 5	.....	.65
5 x 7	.....	1.10

Send for our new complete Price-List

Sole Agents for the United States

RALPH HARRIS & COMPANY

26-30 Bromfield Street, Boston, Mass.
N. Y. Office, 108 Fulton Street

MAGAZINE-CLUBS FOR 1914

All previous quotations are hereby canceled

Class No.	Publisher's Price	Class No.	Publisher's Price	Class No.	Publisher's Price
25 Abel's Photo. Weekly	\$1.50	23 Field and Stream	\$1.50	40 Outdoor World and Recreation	\$2.50
73 Amateur Photographer (w'kly) London (postpaid)	3.65	17 Forest and Stream (m)	1.00	50 Outing	3.00
15 Amateur Photographer's Weekly	1.00	47 Forest and Stream (w)	3.00	60 Outlook (weekly)	3.00
17 American Boy	1.00	35 Fra	2.00	23 Overland Monthly	1.50
55 American Homes and Gardens	3.00	23 Garden Magazine	1.50	20 Pearson's Magazine	1.50
23 American Magazine	1.50	16 Gas Engine	1.00	17 Philistine	1.00
19 American Motherhood	1.00	56 Graphic Arts	3.00	24 PHOTO-ERA	1.50
24 American Photography	1.50	27 Green Book	1.50	20 Photographic News	1.00
15 Amer. Poultry Journal	1.00	70 Harper's Magazine	4.00	27 Photographic Times	1.50
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17 Camera Craft (new)	1.00	60 Literary Digest (weekly)	3.00	60 St. Nicholas (renewal)	3.00
20 Camera Craft (renewal)	1.00	17 Little Folks (new)	1.00	35 School Arts Magazine (10 Nos.)	2.00
100 CameraWork (quarterly)	8.50	20 Little Folks (renewal)	1.00	55 Scientific American (w)	3.00
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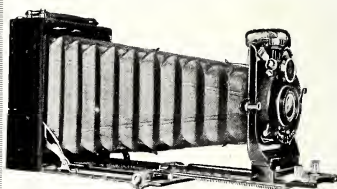
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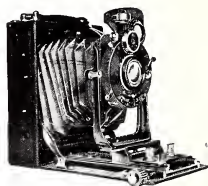
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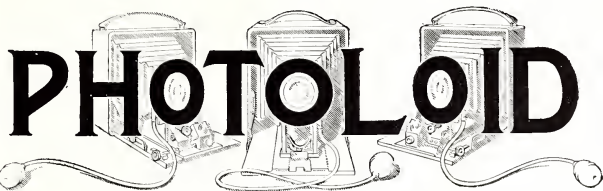


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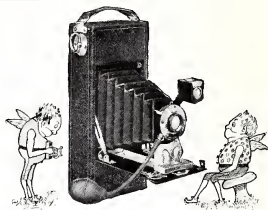
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CONTENTS

- | | |
|---|--|
| I. Introductory | XI. The Place of Photography in Fine Art |
| II. The Scientific Sense in Pictures | XII. Breadth v. Detail |
| III. Balance | XIII. The Man in Art |
| IV. Evolving the Picture | XIV. Specific Qualities and Faults |
| V. Entrance and Exit | XV. The Picture-Sense |
| VI. The Circular Observation of Pictures | XVI. Color, Harmony, Tone-Values |
| VII. The Line of Beauty and the Rectangle | XVII. Envelopment and Color-Perspective |
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This ability to depict the strong and weak points of individuals and teams in sports and games has been discovered to be of much help to coaches and instructors. Consequently the camera is being constantly called in action by those who direct the activities of the college, club and unattached athlete. Photographs of the crews in training at Cornell and Columbia are taken each season and thrown on the canvas in enlarged form while the coaches point out faults in watermanship. The same sys-

tem is used in the development of several of the big varsity foot ball teams.

Even the motion picture machine is found of assistance. The German Olympic commission, which recently spent a month investigating the American athletic system, took back reels of films showing some of our leading athletes in action. Pictures of one of the leading United States tennis players were taken last spring to prove to England that he did not foot fault in serving. Perhaps in years to come it will be possible for a competitor to rise to the pinnacle of sporting fame uncoached except by the films which will show him his faults as compared to those of the competitor who is considered the final word in perfect playing form.

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It was established for the purpose of assisting the Kodaker over the rough places on the road to successful picture making. No one willingly makes mistakes and all are usually glad to learn how to avoid them.

The Kodak Correspondence College includes a corps of capable, experienced instructors who are conversant with the latest and most approved methods of picture making. A member is expected to take up the different photographic processes step by step and to submit his finished work. It is the business of the instructors to offer such criticism as will be helpful in each particular case.

It means that you will receive individual attention. The Kodak Correspondence College is not a department where the teachers mail form letters to the interested amateur. Each individual receives as careful and thorough instruction, by mail, as he or she would receive were it possible to attend such a school in person.

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In the manual given with each Kodak you will find an application blank for membership in the college. The fee is two dollars which covers only the cost of the college text-book and pays a portion of the postage and stationery. We pay the postage in returning prints and films submitted by a member but the member is expected to pay transportation both ways on all glass plates.

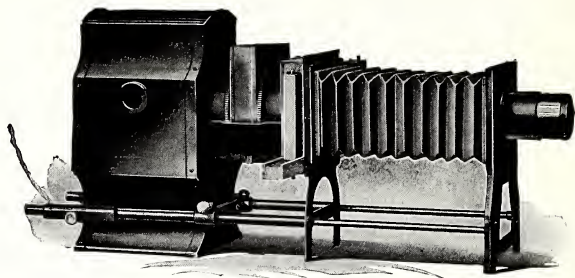
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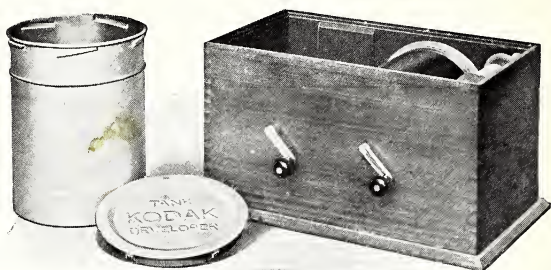
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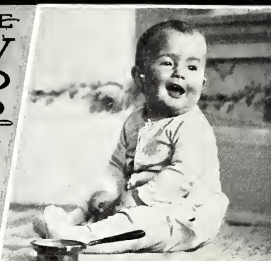
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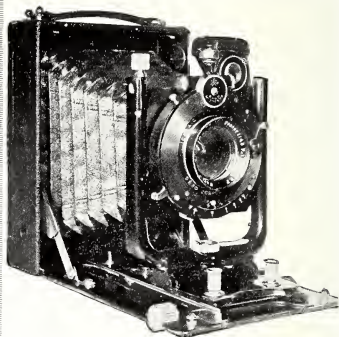
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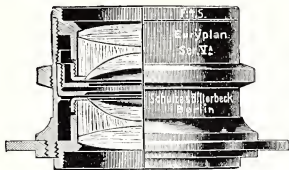
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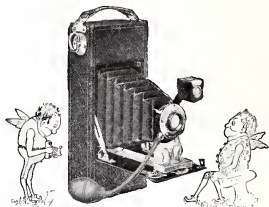
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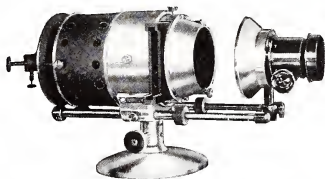
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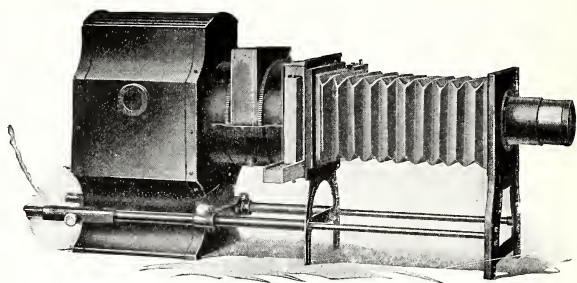
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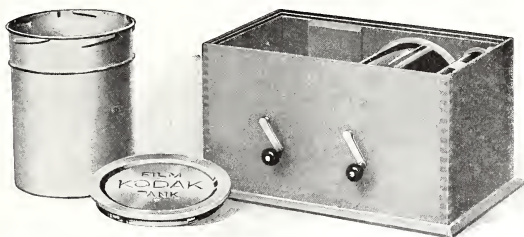
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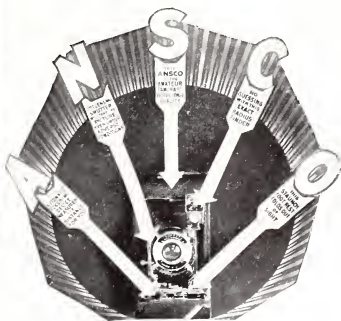
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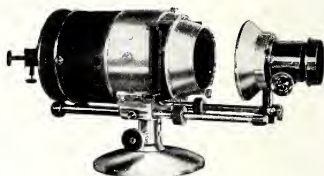
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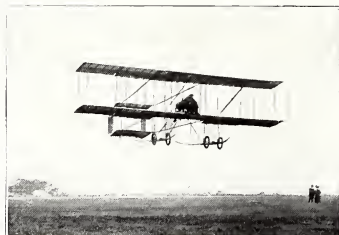
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For sparkling, brilliant negatives at the highest speed, use a Heliar. It is also an ideal lens for home-portraiture. You can catch every fleeting expression, the cutest attitudes of the kiddies at play.

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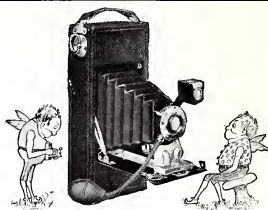
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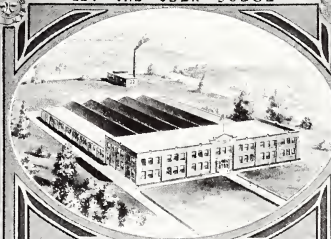
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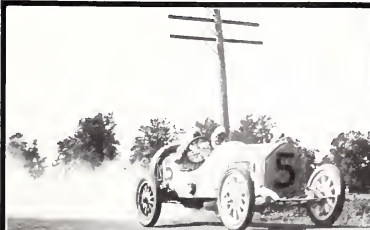
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Negatives with delicate gradation and detail; Pyro Printing-quality

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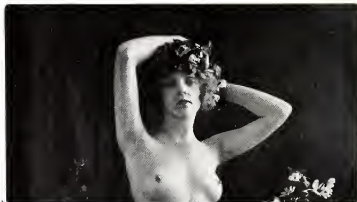
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The first two sets of original photographs, A and B, were accorded such high praise for beauty of pose, excellence of photographic technique and sincerity of purpose that three new sets, C, D and E, have been prepared. Each subject is an art-gem and the variety is very great.

These are direct, black photographic prints on double-weight paper intended for the exclusive use of photographers in high standing, painters, illustrators, designers and art-students. There is no catalog, samples are not submitted nor are the sets sent on approval; but they are sold under the Photo-Era Guaranty which every reader knows is an absolute assurance of satisfaction in every respect. *In neat portfolio, express-paid.*

Price, \$5.00 each

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PHOTO-ERA the Blue-Book of Photographic Advertising

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will come again, but in the meantime we shall just have
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THE CENTRAL "SPECIAL"

will save you a bunch of resittings and that
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CENTRAL DRY PLATE COMPANY
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We develop and mount Auto-
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F. W. DEVOE & CO.'S ARTISTS' OIL-COLORS



Are scientifically "true colors" carefully pre-
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As manufacturers we have given special con-
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For mounting photos, use only Indestructible
Paste, the best kind made for this purpose
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BECAUSE—RATES ARE LOW

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22,500 Tons

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**A VERY SIMPLE AND THE MOST EFFECTIVE PROCESS FOR
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Far Superior to Any Oil-, Water- or Aniline-Colors

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"I am using the 'Assur' colors and find them an excellent medium for coloring photographs on any paper. It requires no artist to obtain the most stunning effects."

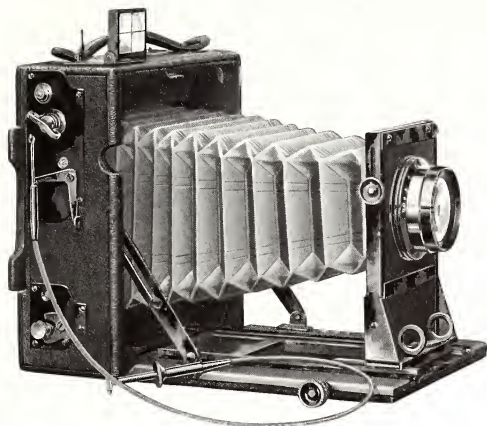
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THE SPEED GRAPHIC



A high grade Focal Plane Shutter Camera, made in the Graflex Factory.

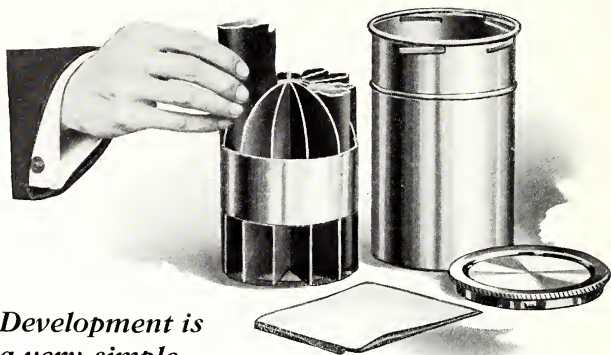
The Graflex Focal Plane Shutter, working at any speed from "time" to 1-1000 of a second, is built into the body of the Speed Graphic, and a big, generous front board permits the use of fast Anastigmat Lenses. The long, black leather bellows harmonizes perfectly with the oxidized metal and black ebonized woodwork.

Full particulars are given in the Graflex Catalog—free on request.

FOLMER & SCHWING DIVISION

EASTMAN KODAK CO.

ROCHESTER, N. Y.



*Development is
a very simple
matter with the*

Premo Film Pack Tank

No skill, no experience whatever, is required.

You merely mix a developing powder in the tank, and fill it up with water to the embossed ring. Then load the films in the cage, place cage in tank, put on cover, and leave films to develop automatically for twenty minutes.

This is all you do, excepting to turn the tank, end for end, several times during the course of development.

A school boy can do it, and when instructions are followed, perfectly developed negatives are bound to result.

There's a Premo Film Pack Tank for each size of Premo Film Pack films. Fully described in the Premo catalogue, a copy of which will be mailed to any address on request.

Rochester Optical Division

Eastman Kodak Co.

Rochester, N. Y.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

WATCH THE TEMPERATURE.

The amateur should give particular attention these cold days to the temperature of the developer for Velox prints. Care should be taken to have the developer at 70 degrees, which insures the best results, and to work in a room of about the same temperature. You may mix your solution properly but if the room is cold the temperature of the developer will soon drop and your print results will suffer.

It is best to keep an Eastman Thermometer in the developing tray in cold weather and keep the temperature uniform. The Velox instructions tell you the proper temperature for your developer is 70 degrees and the fixing bath and wash water about 50 degrees.

Stick the thermometer in the developer the next time you make Velox prints and you will be surprised at the rapid change if you are working in a cold room.

It is a simple matter to warm a tray of developer when it has dropped below 70 degrees. Fill a large tray with hot water and let your developing tray rest in this until you have secured the proper temperature. Keep a sharp watch on the thermometer and remove the tray from the warm water when developer has reached 70 degrees.

Be careful not to raise the temperature above 70 degrees, for a developer that is too warm softens the gelatine and produces chemical fog, while one that is too cold retards development and produces flat, weak prints.

There is also the uncertainty of securing correct exposures when the temperature of the developer varies. Regular Velox should develop in from fifteen to twenty seconds, while the Special Velox requires about thirty seconds at 70 degrees. If the developer becomes colder the prints develop more slowly, giving the impression that the print has been under-exposed.

The tendency then is to give more exposure, and in so doing the prints are even worse than before.

There is but one way to secure perfect results and that is to follow instructions in all things. Ask your dealer for a copy of the Velox Book. It is filled with interesting and dependable information that will help you to avoid mistakes and secure better and more uniform results. An Eastman Thermometer should also be a part of your photographic equipment.



IS YOUR CAMERA FAR SIGHTED?

To be without my Kodak Portrait Attachment would be as much of a misfortune to me as for Grandma to be without her reading glasses. It would be as impossible for the Kodak to see things close by as for Grandma to read the fine print in the newspaper. Without a Portrait Attachment your Kodak is far sighted.

The normal vision of most hand cameras begins at six feet and reaches to infinity. If they were so constructed as to focus (with just the regular lens) on objects closer to—a much longer draw of bellows would be required and this in turn would require an extension bed—and presently they would no longer be pocket cameras. By means, however, of the Kodak Portrait Attachment this trouble has been cleverly overcome—it is the Kodak's reading glass for objects nearer than six feet.

When Ordering Goods Remember the PHOTO-ERA Guarantee

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

You may say, "Who wants to make pictures of things that are too small at six feet? They would be so small they would not be worth while any way." But such is not the case. The object which is too small at six feet is often just the right size for a Kodak picture at three and one-half feet.

At six feet your Kodak will make almost a full figure picture of a person sitting but at three and one-half feet only the head and shoulders are included.

The focusing type of Kodak will allow of pictures at even shorter range. For instance, if a 3A Kodak is set for pictures at 100 feet, and the Portrait Attachment is slipped on over the lens, an object $4\frac{1}{2}$ feet away is in correct focus; if set at 25 feet the object 4 feet away is in correct focus; at 15 feet, the object $3\frac{1}{2}$ feet is in correct focus; at 8 feet the object 3 feet away is in correct focus and if set at 6 feet, the object 2 feet, 8 inches is in correct focus.

By this it will be seen that with a focusing Kodak and Portrait Attachment most any object becomes a suitable subject for a picture. And as for portraits, well you can get close enough to make a portrait of the baby, or just the right distance for a head and shoulder picture of Grandpa or Grandma. The window they sit by to read the paper is usually the one which gives the best light for your portrait.

And what a joy these intimate home portraits are to the owner of a Kodak. Not technically perfect to be sure, and extremely informal, but they have their value in preserving the story of the home. They are the marginal illustrations, as it were, that fill in between the more formal full page pictures and lend added interest to all the little incidents of the home story.

Then there are the bits of still life that make most interesting studies if the objects are tastily arranged. Potted house plants, cut flowers, a basket of

fruit; there are any number of such subjects that make beautiful decorative pictures when made with the Portrait Attachment.

Spring will soon be here and the wild flowers and other nature studies will add to the Portrait Attachment possibilities. The fifty cents you spend for the attachment will seem a small investment compared with the excellent results you will secure.

The beautifully illustrated booklet, "At Home with the Kodak" is free at your dealers or by mail. Call or send for your copy to-day. A careful reading of its pages will open your eyes to a new and most interesting phase of Kodak work.

COLOR YOUR PRINTS

Anyone can make beautifully colored prints by the use of Velox Transparent Water Color Stamps. No previous experience is necessary. Just a brush or two and the book of stamps which includes complete directions. Your collection of prints will be more interesting by the addition of colored pictures from your best negatives. The Velox Water Color Outfit is shown on another page.

Eastman Kodak Company

ROCHESTER, N. Y.. *The Kodak City.*

AN ALBUM'S THE THING.

Envelopes, books and magazines are poor filing places for your prints and amateurs have learned the truth of this statement after many disappointments. After all is said and done it is agreed that an album is the proper thing to house the prints of the amateur.

Prints mounted in an album are never mislaid nor lost. When you want a particular print it is easily found and always in the same place—and those amateurs who have mislaid their prints time and again appreciate the importance of having the picture, always in the same place.

Some amateurs prefer an album which allows for expansion. For these the Interchange is a popular and convenient album, fashioned after a loose leaf book. Bound in embossed leather covers with grain leather corners and back, it is most desirable and will wear well.

This album can be had in four sizes—each sufficiently large to hold prints made with any size Brownie or Kodak. Style A 5 x 8 inches and costs \$2.50; Style B is 7 x 11 and costs \$3.00; Style C is 10 x 12 and costs \$4.25 and Style D, the largest, is 11 x 14 and costs \$5.00. Each album numbers 50 linen finish leaves.

The leaves in the Interchange are held fast by two inter-locking screws, which can be easily loosened and new leaves added as desired. In this way the capacity of the album can be almost doubled.

In mounting the prints it is advisable as well as most practical to use Kodak Mounting Tissue which prevents the prints from curling and the pages of the album from wrinkling. There is no danger of daubing the pages and spoiling the attractiveness of the album, with paste marks when dry mounting tissue is used.

Many amateurs mount their pictures in groups, by seasons, and some make an annual record of the year in pictures.

The titles of the pictures and any interesting facts relating to the picture making, written under the prints in white ink, will add to the general interest of the book.

The best place to look into the conveniences of the Kodak albums is at the Kodak dealer's store in your city. The dealer will be glad to show you his stock.

Eastman Flash Sheets and Flash Sheet Holder.



Showing Flash Sheet held in position.

Eastman Flash Sheets burn slowly, giving a broad soft spread of light and are preferable where instantaneous exposures are not absolutely necessary.

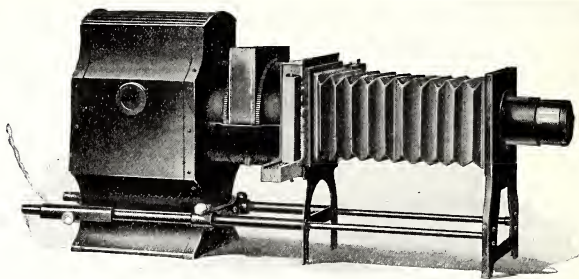
Securely fasten a sheet in position, hold in an upright position at desired height and ignite from the back.

THE PRICE.

No. 1 Flash Sheets, per pkg. of six sheets, 3 x 4,	\$.25
No. 2 Flash Sheets, per pkg. of six sheets, 4 x 5,	.40
No. 3 Flash Sheets, per pkg. of six sheets, 5 x 7,	.60
Eastman Flash Sheet Holder, - - - -	1.00

Ask your dealer for the illustrated booklet, "By Flashlight." Mailed free on request.

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THE KODIOPTICON

offers the most simple and enjoyable means of entertaining your friends with illustrated stories of the good times recorded by your Kodak.



VELOX LANTERN SLIDE

*The lantern
slides are made
like Velox prints
on*

VELOX LANTERN SLIDE FILM

The combination of the two places lantern slide making and projection within reach of every owner of a Kodak.

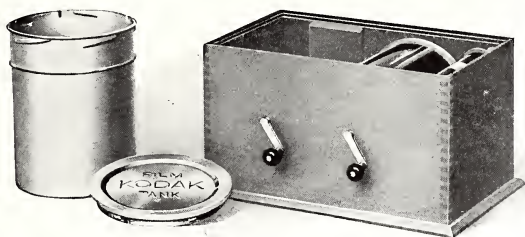
The pictures thrown on the screen by the Kodiopticon are perfect enlargements of your Kodak pictures; clear, brilliant, and of such large size that a whole company of friends may enjoy them,

THE PRICE.

Kodiopticon, complete with Mazda Lamp, - - -	\$20.00
Velox Lantern Slide Films, per doz., - - -	.30

Have your dealer show you or write for descriptive circular.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.



There's the element of certainty in
the work of the

KODAK FILM TANK

The best result from every exposure is assured. The inexperienced amateur is not required to use his judgment.

The experience is in the Tank.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

At your dealers.

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The

BIG CAMERA
POSSIBILITIES
of a KODAK
are found in the



KODAK PORTRAIT ATTACHMENT

It increases the efficiency of the Kodak by changing the focus of its lens—makes it see things sharp at shorter range, the things it sees naturally being larger in the picture.

That's why the Kodak is placed closer to the subject when the Portrait Attachment is used. Most any small object assumes suitable proportions for a Kodak picture when this inexpensive little device is slipped over the Kodak lens.

50 cents at your dealers.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

In little villages and great cities of America live women whose grace and beauty and personal charm would easily place them among the most fascinating in the world. *You* of the little village and *you* of the great cities know these women. And you can present their beauty before the world. Does that interest you? Will *you* help?

Poets, artists and historians have perpetuated the glories of Helen of Troy, of Cleopatra, of Salome; Poppæa Sabina, Francesca da Rimini, Marie Antoinette, Mary of Scotland, Josephine, and many other beauties of ancient days; but what of the lady of your own home-place whose loveliness excels them all?

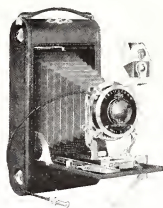
Will you help Ansco Company perpetuate her glories?

Women whose charms have made and unmade kings are unquestionably fascinating, but in America—in the smallest villages and largest cities—one sees hundreds of feminine faces that for genuine loveliness eclipse the renowned beauties of olden times. Somewhere in this land your “loveliest woman” lives—a wife, a mother, a sister, or a sweetheart or friend, but surely *someone* somewhere. It should be *your* pride and *your* effort that places *your* “loveliest woman” among the fifty whose fascination excels those of whom the poets sang. *Her* picture should be among “America’s 50 loveliest women.”

Will you place your faith in *your* “loveliest woman?” Will you make this exhibition the most notable presentation of womanly beauty the world has ever gazed upon?

Conditions of this \$5,000.00 contest are very simple. The Ansco dealer in your town will present you with full information and instructions with our compliments, or we will gladly mail you copies of the contest folder, if you will write

ANSCO COMPANY, Dept. G, Binghamton, New York



No. 3A Ansco Speedex takes $3\frac{1}{4} \times 5\frac{1}{2}$ size pictures, and is equipped with a high-grade Ansco Anastigmat lens and Optimo shutter with a maximum speed of $1/300$ th of a second. The price is \$55.00.

ANSCO COMPANY

produces the Ansco, the amateur camera of professional quality; Ansco color-value film; Cyko, the paper that gives prints of rich, soft quality that never fade, and Ansco photo chemicals. Their value in producing superior results has been proven many years by amateurs and professionals.



DO YOU EVER THINK

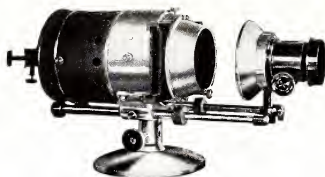
of the reason that the pictures by acknowledged leaders in photography always show such delicate gradation of tone-values, such smooth shadows, delicate detail and general chemical excellence? **THEY use**

CRAMER PLATES

THIS IS NOT "ADVERTISING," IT IS FACT

G. CRAMER DRY-PLATE CO.

ST. LOUIS, MO.



PERFECT LANTERN-SLIDE PROJECTION With a VICTOR

The **VICTOR PORTABLE**, the "Aristocrat of Stereopticons" is the world's most popular standard slide-projector. Scientifically perfect, beautifully designed, rigidly built, lastingly serviceable.

The **VIOPTICON** is a stereopticon "pocket-edition" using a new smaller slide, but producing the same size and brilliancy of image as the standard size. Contact slides made from "vest pocket" negatives—enlargements made from them too.

VIOPTICON STOCK SLIDES on thousands of interesting subjects at 10 cents each.

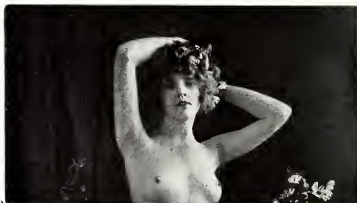
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VICTOR ANIMATOGRAPH CO.

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THREE NEW SETS

LIFE-STUDIES

DRAPED AND FROM THE NUDE

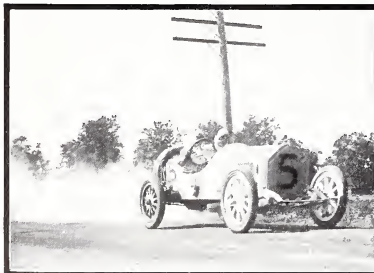
The first two sets of original photographs, A and B, were accorded such high praise for beauty of pose, excellence of photographic technique and sincerity of purpose that three new sets, C, D and E, have been prepared. Each subject is an art-gem and the variety is very great.

These are direct, black photographic prints on double-weight paper intended for the exclusive use of photographers in high standing, painters, illustrators, designers and art-students. There is no catalog, samples are not submitted nor are the sets sent on approval; but they are sold under the **Photo-Era Guaranty** which every reader knows is an absolute assurance of satisfaction in every respect. *In neat portfolio, express-paid.*

Price, \$5.00 each

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| A. 20—5x7 Prints | B. 12—8x10 Prints |
| C. 20—5x7 Prints | D. 12—8x10 Prints |
| E. 12—8x10 Prints | |

PHOTO-ERA, Trade Agent, 383 Boylston St., Boston



Nothing too fast for our New Three-glass F 4.5 Euryr

Gil Anderson, winner of
Elgin Cup Race, going
75 miles an hour.

THE F4.5 Euryr
got him.

¶ We have F 6.8, 5.4 and 4.5 Euryrns
in Barrels and Compound Shutters.
Send for descriptive circulars and prices.

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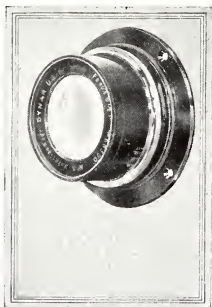
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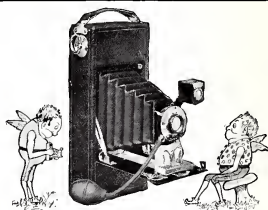
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FOLDING PIXIES, rapid rectilinear lens

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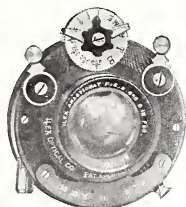
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¶ The **ILEX ACME** shutter is designed especially to meet the demand for a high grade, extremely rapid shutter which embodies the **ILEX** features. The speeds obtainable are from 1 second to 1-300th part of a second, including time and bulb exposures. It works without jar or recoil and is fitted with iris diaphragm.



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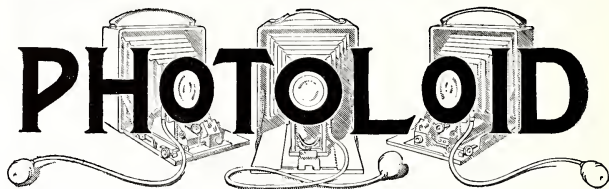
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Read what the papers say of



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"Dr. Henry E. Kock, of Cincinnati, realizing the defects of a paper support, after many years of experimentation produced a material free from all objections to paper. This is Photoloid. The prints we have seen convince us that the alert professional can make a large extra profit by adopting this remarkable printing medium. The effects are very similar to those obtained by transferring carbon prints to ivory and other supports. We cannot do justice to Photoloid in a reading notice, so we ask every reader to send at once for the interesting eight-page circular which gives full details."

CAMERA CRAFT

A New Printing Medium

"The attention of our readers is called to the new advertisement of Photoloid that appears in the advertising section. We would advise all our readers to investigate this new printing medium by sending to the manufacturers for a package and giving it a careful trial. The cost is higher than that of ordinary printing paper, but we believe that the superior results will justify the higher price in the eyes of those workers who are appreciative of the best work."

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"The attention of dealers and consumers is called to the advertisement of the Fiberloid Co. Our readers who have attended conventions are familiar with this new product; a hard, impervious, water-proof emulsion on a tough, flexible, double-weight water and chemical proof backing. It is printed the same as gas light paper, is easy to handle and the finished prints possess both charm and novelty. Dealers should lay in a stock for the holidays as Photoloid is especially suitable for the making of gift pictures."

WILSON'S PHOTOGRAPHIC MAGAZINE

A NEW PRINTING MEDIUM

"Photoloid—the new printing medium—wherever shown or tried is making a host of friends. It is a developing emulsion coated on a special waterproof stock, which does away with mounting and also permits the tinting of the print from the back if desired. The resulting prints closely resemble a carbon print."

THE CAMERA

"A new printing medium that yielded prints in our hands similar to carbon is Photoloid. It is not a paper, but comes prepared on a special material that needs no mounting, is non-curlable, and, owing to the semi-transparency, permits of tinting in the easiest possible manner. Photoloid makes a beautiful miniature, if colored with water colors or the Assur colors. The prints resemble carbons or platins."

Correspondence with dealers solicited regarding special proposition.

THE FIBERLOID COMPANY 55 Fifth Avenue
NEW YORK



CAMERA USERS, professional or amateur, are talking of **PHOTOLOID**—the new discovery in print material.

PHOTOLOID greatly simplifies the securing of artistic results. This process is similar to any "gas light" paper and no more difficult in manipulation.

PHOTOLOID is an impervious product made of Fiberloid, imperishable, stainless, fadeless and easily washed.

PHOTOLOID has a beautifully fine, hard, matte surface and readily receives the most delicately artistic photograph in the minutest detail. The depth of tone and brilliancy in the finished print are remarkable, while the high lights, deep shadows and graduated half tones are artistic triumphs.

PHOTOLOID is not perishable like paper.

PHOTOLOID does not need mounting.

PHOTOLOID does not curl up nor fray at the edges—paper does both.

PHOTOLOID comes both translucent and opaque—paper is made in opaque only.

The difference in the permanence and beauty of appearance between **PHOTOLOID** and ordinary print paper is so great that the difference in cost is not worth considering.

PHOTOLOID is made in Porcelain White opaque, Veined Ivory and Cream translucent. Blacks, Sepias, Olives and Grays printed by direct development.

PHOTOLOID takes water-colors easily, making wonderful miniatures. Assur colors produce beautiful results.

PHOTOLOID is ideal for transparencies.

If your dealer cannot supply you, write to us. We will promptly fill all orders accompanied by remittance, *but be sure to specify the color and size desired.*

	Half Dozen	One Dozen
Size 3 1/4 x 5 1/2	\$.50	\$.90
" 4 x 6 . . . . .	.70	1.25
" 5 x 7	1.00	1.75
" 8 x 10	2.25	4.00
" 10 x 14	4.00	7.00

THE GOOD OLD SUMMER-TIME

will come again, but in the meantime we shall just have
to put up with the yellow hazy light which is bound to
prevail at this season of the year

THE CENTRAL "SPECIAL"

will save you a bunch of resittings and that
means saving money

CENTRAL DRY PLATE COMPANY

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N. B.—Write for "Darkroom-Pointers"



*Print obtained from half
of the negative which had
been intensified for 15 m.
in Victor Intensifier*

*This side shows Print
from the half of nega-
tive which was not in-
tensified*

BUILD UP YOUR THIN NEGATIVES TO GOOD PRINTING-DENSITY

by a few seconds' immersion in

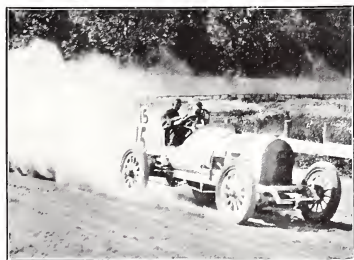
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Just one simple solution. Owing to its great strength, it
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Your dealer carries and recommends it

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Series II. F/4.5

SERIES II Anastigmats have a snap and brilliance
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cameras like the Graflex, they are unrivalled, yet they
may be stopped down and used like other lenses for
ordinary work.

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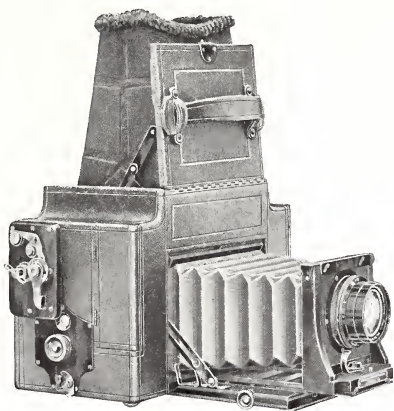
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MAIDEN LANE

NEW YORK



THE 3A GRAFLEX

This camera makes pictures $3\frac{1}{4} \times 5\frac{1}{2}$ inches on the standard 3A Kodak Film.

It is fitted with the Graflex Focal Plane Shutter which will let you make exposures of any duration from "time" to $\frac{1}{1000}$ of a second.

When you look in the focusing hood you see the image right side up, the size it will appear in the finished picture. There is no necessity for estimating the distance between the camera and subject—focusing scale and finder are done away with.

With the 3A Graflex you can make snap shots in the shade or even indoors. Outdoors, when the sun is shining, you can make a picture in as short a time as $\frac{1}{1000}$ of a second, if you wish.

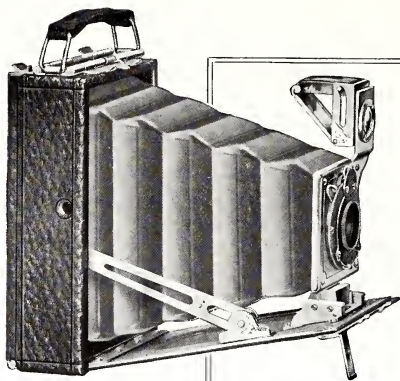
If you will send us your name and address we will mail you our 64-page illustrated catalog, which tells all about Graflex Cameras and how they work. Be sure to specify GRAFLEX Catalog.

FOLMER & SCHWING DIVISION

EASTMAN KODAK COMPANY

ROCHESTER, N. Y.

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An efficient
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*Weights only
11 ounces*

*Dimensions
1½ x 3 x 4¾
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*Loads in day-
light*

*Makes good
pictures*

Premoette Jr.

A marvellously compact camera, just a trifle larger than the pictures it makes, and so well made, so carefully equipped and tested, that it makes pictures equal in quality to those made by much larger and more expensive cameras.

It will go into any coat pocket or a lady's hand-bag, and will produce sharp, crisp negatives which will yield good size pictures by contact or excellent enlargements of almost any size.

The Premoette Jr. No. 1 is well made in every respect, it loads in daylight, is fitted with ball bearing automatic shutter and carefully tested lens, and makes 2¼ x 3¼ pictures. The Premoette Jr. No. 1A, similar to No. 1 but for 2½ x 4¼ pictures, price \$8.00.

Get the new Premo catalogue — a book that no one interested in photography should be without. It describes the many Premo advantages fully — the daylight loading Film Premos, the Premos that take films or plates with equal facility, the Premo Film Pack and tank developing system. It's free at the dealer's, or will be gladly mailed to any address on request.

Rochester Optical Division

Eastman Kodak Company

Rochester, N. Y.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

COLOR SCREENS AND WHAT THEY DO

Color Separation sounds like a pretty deep subject to the average Kodaker, but it is very interesting and simple when it is boiled down to the point where you can get that part of it which is of use to you in your Kodak work and are not confused by the fine technical points of the subject.

Every ray of white light is made up of all the colors of the spectrum—we might say all the colors of the rainbow, for the rainbow is the spectrum. A ray of white light may be separated by a prism and the spectrum colors plainly seen. They begin at the left with violet and blend into blue, green, yellow, orange and red with the tints of these colors in between.

Photograph these colors on an ordinary plate and they are altogether different in the picture from what you saw when you looked at the colors.

Your eye told you the blue was dark, but it photographed white. The yellow looked the lightest of all the colors, but it photographed darker than the green, and the red appeared absolutely black in the picture.

Color Separation simply means the use of color screens in front of your lens to make these colors photograph the way they should, and we will try to tell you in the most simple manner the way to do it.

First of all, you must use an orthochromatic plate or Kodak N. C. Film which is properly orthochromatic. By this we mean it is sensitive enough to the yellows and greens to make these colors photograph as light and the blues as dark as they appear to the eye, when a proper color screen is placed over your Kodak lens.

Without a color screen, Kodak N. C. Film will give very good orthochromatic results, will give good cloud effects

against blue skies, etc., but to secure the very best results, the extreme sensitiveness of the film or plate to blue must be cut down; the blues must be made to photograph as dark as they look to be, and this is done by a yellow color screen.

This color screen absorbs the greater percentage of blue rays of light, that is, it prevents them from reaching the film, so the blue photographs dark and so white clouds show beautifully against the blue sky in your picture.

This yellow color screen absorbs only the blue light, so the other colored light reaches the film, and as this film is sensitive to yellow and green by reason of its being orthochromatic, the yellow and green objects are as light in the picture as they should be.

There is one very important point about color screens that must not be overlooked: the screen must be the right sort of yellow or it will surely cut down the exposure without giving correct results.

The Kodak Color Screens are made scientifically correct by our color separation experts and will give perfect results with an increase of only ten times the ordinary exposure. An instantaneous exposure is thus increased to one tenth of a second with a Kodak Color Screen. This is because the screen cuts out about 90% of the blue light—and it is this blue light that makes very short exposures possible. Color screen results, however, are worth the longer exposure.

Try two exposures where you have a mass of yellow, blue and white flowers, or blue sky and white clouds, one with the Color Screen and one without, and you will not question which result is most pleasing and most true to nature.

Kodak Color Screens may be had from your dealer. Once you have used one you will not be without it.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

ANASTIGMAT ADVANTAGES.

A great many amateurs who do not own an Anastigmat lens, and some few who do, have a misconception of the real advantage of the Anastigmat as a part of the Kodak equipment.

It is an advantage, which if taken properly, will increase the efficiency of the Kodak, and yield results not obtainable with the ordinary lens under the same conditions, but it is also an advantage which must not be abused.

It must be borne in mind that the speed of an Anastigmat lens is due to its having a much larger opening than the Rapid Rectilinear lens. This larger opening allows more light to enter the camera in a given length of exposure so a snap shot may be made with the Anastigmat under conditions of light which would mean failure with the R. R. lens.

To be specific, the Anastigmat lens working at an opening of $f.6.3$ has 61% greater speed than the R. R. lens working at $f.8$. That is, the $f.6.3$ stop allows 61% more light to enter the camera in a given time than does the stop $f.8$, which is the largest opening of the R. R. lens.

But one must also remember that the larger the stop used, the less will be the depth of focus. Use the largest stop, set the focus at fifteen feet, and objects at exactly that distance will be perfectly sharp. Objects nearer and farther than fifteen feet, however, will not be so sharp. Use a smaller stop and objects nearer and farther than fifteen feet will become sharper, the space between two points at which all objects are perfectly sharp being called the depth of focus.

Each succeeding smaller stop increases this depth of focus, while each larger stop decreases it. For this reason, the largest opening of the Anastigmat does not have great *depth*

of focus, but every object in a flat plane at the distance on which the lens is focused is perfectly sharp to the very corners—sharper in fact than is possible with the R. R. lens.

While the Anastigmat lens does not have great depth of focus at its largest opening, it does have the same depth of focus as the R. R. lens at each opening of corresponding size.

Depth of focus must be sacrificed for speed in all lenses—this being an unalterable law of optics.

The speed of a lens and speed of a shutter are different things. The faster the lens, the faster the shutter that may be used with it. An Anastigmat lens working at $f.6.3$ will give the same exposure in $1/160$ of a second as an R. R. lens in $1/100$ second. For this reason, it is an advantage to have the Anastigmat lens in a shutter working at a speed of $1/200$ second for use in bright weather. But it would be folly to use a speed of $1/200$ second for an exposure which you could not possibly make in $1/100$ second with a Rapid Rectilinear lens.

Use an Anastigmat lens the same as you would your R. R. lens, except on bright days, when the fastest exposures may be made for fast moving objects. Use the same comparative stops you use with your R. R. lens, except for speed work as mentioned above, and for dull day pictures, when the largest opening $f.6.3$ will give 61% better exposures than the largest opening of the R. R. lens.

It is reserve power that makes the Anastigmatic advantage, but you don't need it on all occasions. It's the time when you do need it badly that you really appreciate such a fast lens—and the results you obtain are worth the difference.

Shutters for Anastigmat lenses are usually marked by the f system, which is determined by dividing the length of focus of the lens by the diameter of the

Eastman Kodak Company

ROCHESTER, N. Y.. *The Kodak City.*

stop. Thus a lens of 6-inch focus with an opening of one inch, works at *f.6*.

The shutters for R. R. lenses are usually marked by the Uniform System (U. S.) which is based on the areas of the openings, each stop of a higher number having one-half the area of the former number and requiring twice the exposure. The U. S. and *f.* stops of equal value will be found in the following table :

TABLE.

U. S.	4	.	.	.	.	.	.	<i>f.8</i>
U. S.	8	.	.	.	.	.	.	<i>f.11.3</i>
U. S.	16	.	.	.	.	.	.	<i>f.16</i>
U. S.	32	.	.	.	.	.	.	<i>f.22.6</i>
U. S.	64	.	.	.	.	.	.	<i>f.32</i>
U. S.	128	.	.	.	.	.	.	<i>f.45.2</i>

There is no exact U. S. designation for *f.6.3*, but it is approximately U. S. 3.

ANTICIPATION.

It's a sort of anticipation season just now, a time when we finish up the work of winter and plan for the coming summer,—but there's a wonderful lot of satisfaction in the anticipation.

I have been adding winter pictures to my album of last summer's Kodak work and when I have finished, will have an entire year's pictures in one album.

If you want a year's pictures all in one album, take my advice and get one large enough. And if it is an Interchange, you will find it can be kept full at all times by adding leaves as you add prints—and it is exceptionally convenient in mounting. Just take the leaves out and mount the prints with Kodak Dry Mounting Tissue, then put them back in the album again. I use the 10 x 12 size, but they are made smaller.

But I didn't intend to talk album when I began. I was only going to tell of my plans for the coming season—the good times I am anticipating.

I bought my Vest Pocket Kodak a little late last season, and I wish now I had bought it earlier. I have been ac-

customed to using my 3A Kodak for most everything and didn't really realize what I could do with the Vest Pocket. However, I found it would fit in the ball pocket of my golf bag and took it with me to the links one day. That day's golf pictures are among the best I have ever made.

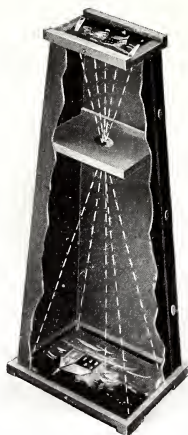
You see the little Vest Pocket Enlarging Camera I bought with the Kodak has given me 3A enlargements from all of these little negatives and they fit right in with my other prints. I had a lot of fun making the enlargements too—and that little Kodak is going to be my constant companion next summer. You *can* serve two masters—golf and a Kodak.

I came off the golf links one day with my little Kodak tucked away in my golf bag and was unexpectedly invited to a sausage roast up the river. It was one of the jolliest picnics I have ever attended, and that little Kodak was the only one in the entire party. I wouldn't take anything for those pictures, and some of the little enlargements are now hanging on the wall of a certain canoe club, in neat little frames, to remind the members of that day's good times. You can play any game, enthuse over any sport and still have your Kodak with you always, if you own a Vest Pocket.

I might go on for hours telling about my album of last summer's pictures, the jolly stories they tell and the good times I anticipate for the coming year, but you own a Kodak, and if you have not made a record of your good times as I have done, you are missing a lot of fun.

I could also tell you many interesting things about my results with a Portrait Attachment and the enlargements Mollie and I made, colored with Velox Water Color Stamps and framed for our den, but you have probably done many of the same things. It's great fun though to plan for next summer—and there is certainly a lot of pleasure in the anticipation.

You can make enlargements



as simply as you make Velox contact prints, all by daylight with the

BROWNIE ENLARGING CAMERA

It fits the want and does the work, up to the sizes within its capacity, as well as more expensive apparatus.

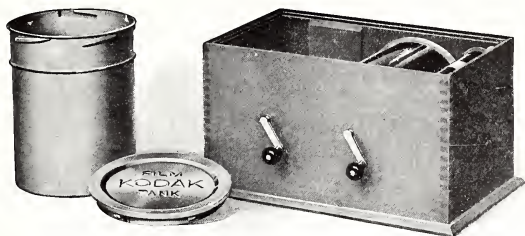
The enlargement retains all the quality of the negative; the results are certain.

THE PRICE

No. 2 Brownie Enlarging Camera, for 5 x 7 Enlargements from 2¼ x 3¼ negatives, - - - - -	\$2.00
No. 3 ditto, for 6½ x 8½ Enlargements, from 3¼ x 4¼ negatives, - - - - -	3.00
No. 4 ditto, for 8 x 10 Enlargements, from 4 x 5 negatives, (will also take 3¼ x 5½ negatives), - - - - -	4.00
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At your dealers.

*Get close to
Nature with a*

KODAK



Rhododendrons, made at 2 ft. 8 in., with Portrait Attachment.

PORTRAIT ATTACHMENT

Slip a Portrait Attachment over the Kodak lens and any object at short range becomes a subject for your Kodak.

The charm of home surroundings offers a fitting background for Kodak home portraits, while all out-doors is filled with material for Kodak pictures at short range.

Wild flowers in their native haunts or other small bits of nature, which seem unimportant because of their size, become excellent subjects when the Portrait Attachment is used.

With fixed focus Kodaks and Brownies, the Portrait Attachment makes objects in sharp focus at exactly $3\frac{1}{2}$ feet, while with the focusing type of Kodaks, the object may be photographed as close as 2 feet 8 inches from the lens.

*Any object at short range is a subject for the
Kodak Portrait Attachment.*

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If your prints lack roundness,
color and life—stereoscopic
effect;

If your sepias look yellow,
washed out and without the
rich Vandyke brown every one
desires;

If you fail to make a hit with
your pictures;

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CYKO Paper is the base of
every good print, the reason
back of every prize-winning
picture, and the foundation of
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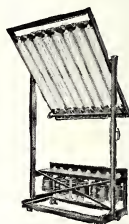
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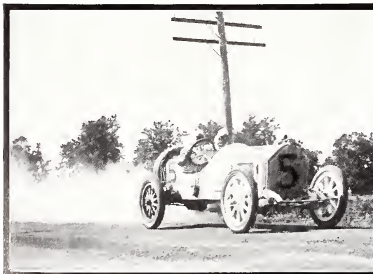
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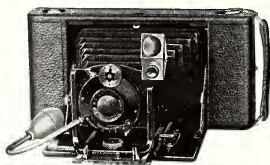
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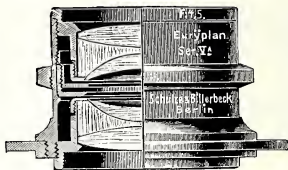
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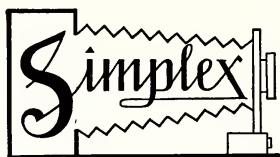


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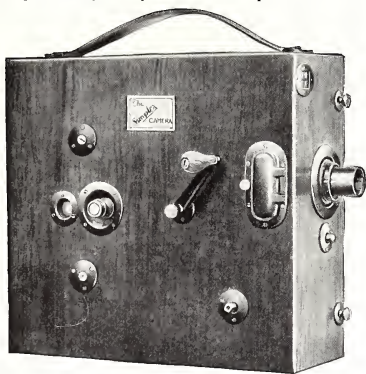
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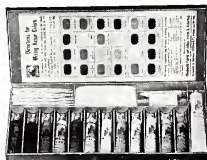
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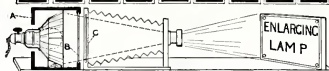
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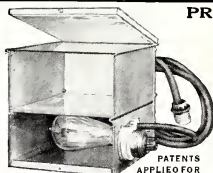
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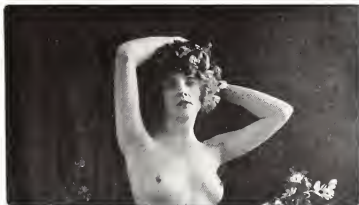
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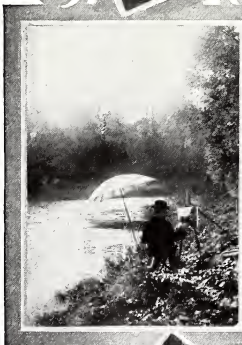
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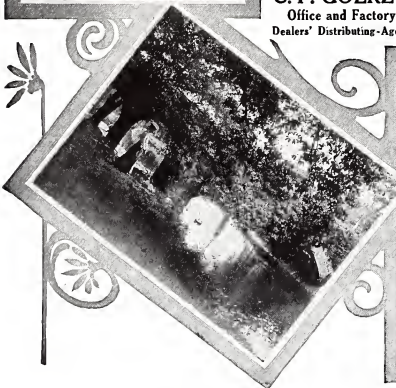
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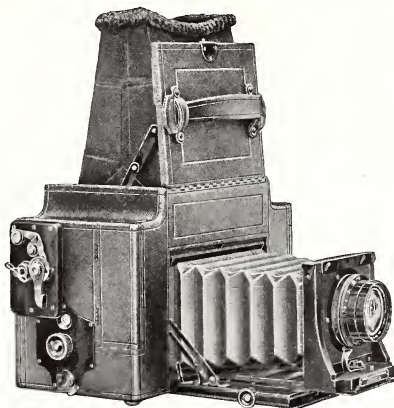
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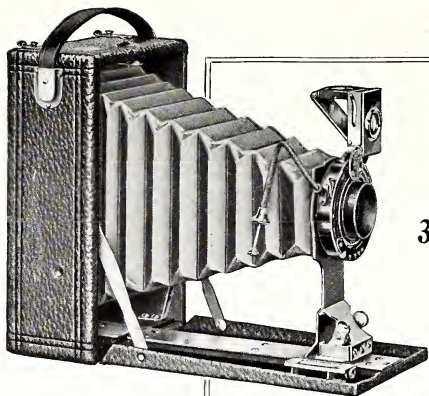
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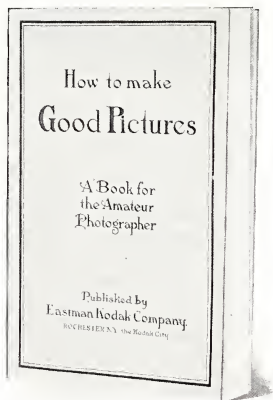
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I had carelessly picked up this album, which my friend informed me was a trip to Smugglers Island, so I opened the book and found myself on the station platform with the spring wagon drawn up ready to take us over to the lake. The trip by rail was omitted because the interest in a vacation trip usually begins at the point where the train journey leaves off. There was the village street, the idlers who come down to see the train pull in—and our spring wagon. We had made a start.

Several pictures of the beautiful road gave an idea of the country, and another, the first glimpse of the lake, or rather the bay which was sheltered from the lake by our island lying between the two.

Then there was the bridge over the outlet that made our vacation home an island, and next, a picture of Tommy holding the wagon gate open for us. And so the story went on until I felt I had made the trip myself. And when the last fishing trip had been finished and we were ready to leave, there was the picture of the good-bye hand shaking, and finally the one made from the wagon with all the folks waving their handkerchiefs.

I have said "we" unconsciously because I took the trip along with the others in those Kodak pictures. And here is the secret of their absorbing interest. Each one was a link in the chain of events. Some were used *only* as links but served to make a most in-

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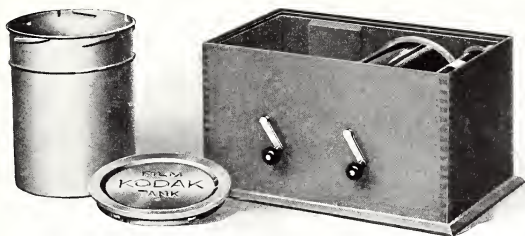
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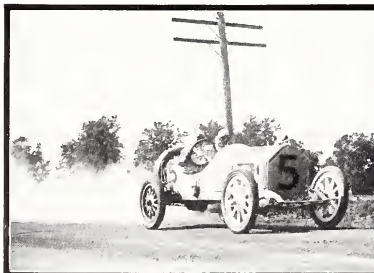
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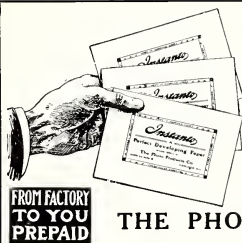
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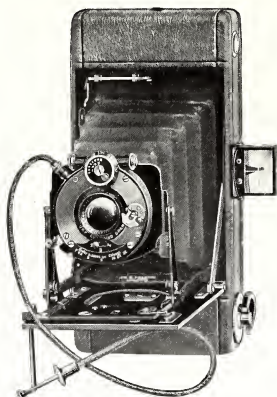
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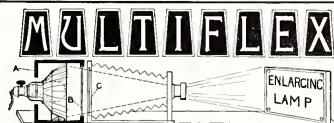
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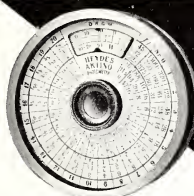
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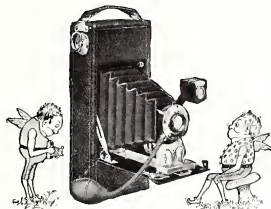
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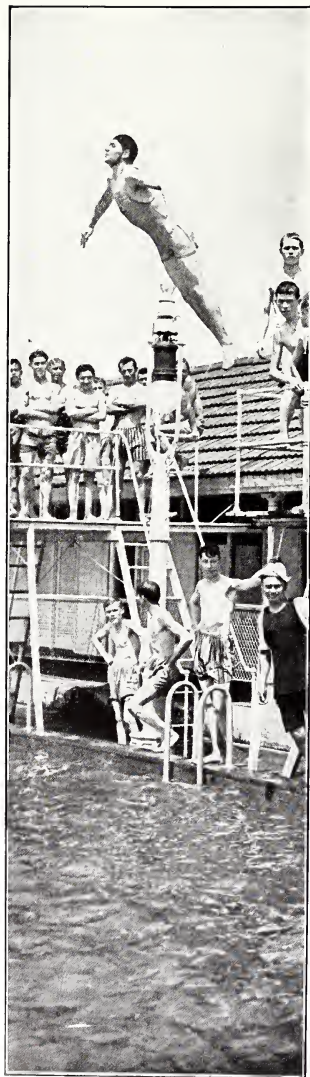


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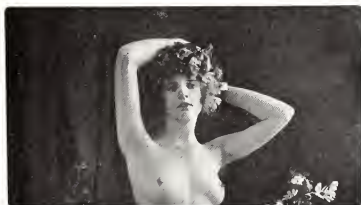
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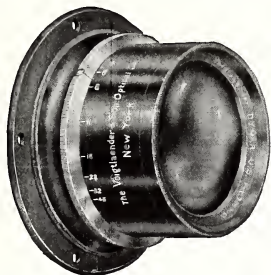
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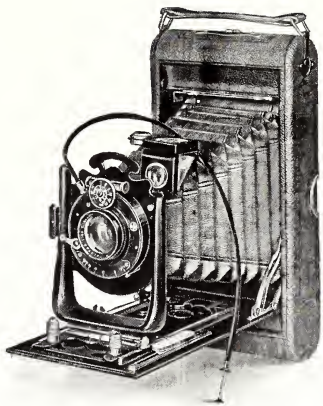
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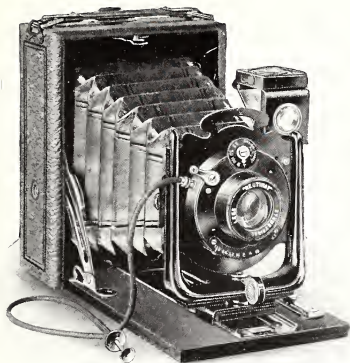
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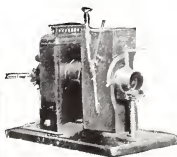
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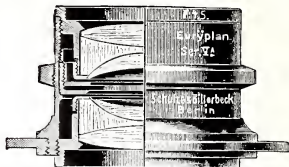
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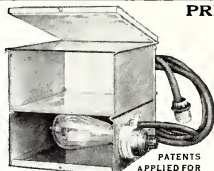
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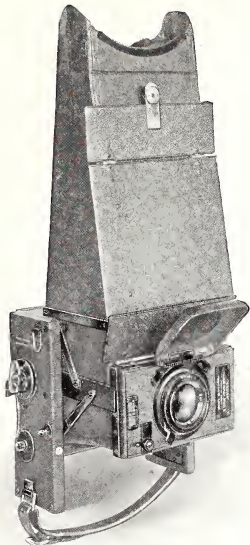
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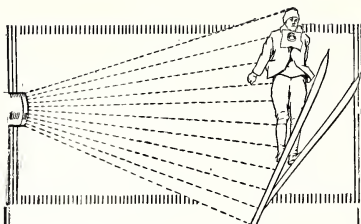
“I tested out my first ‘Smith’ Doublet in California, and I remember being greatly impressed by the marvelous way in which it rendered the brilliant sunshine of that region. That is where the anastigmat always falls down. It gives everything a hard edge, but the ‘Smith’ Doublet seems able to translate the very vibrations of sunlight.”

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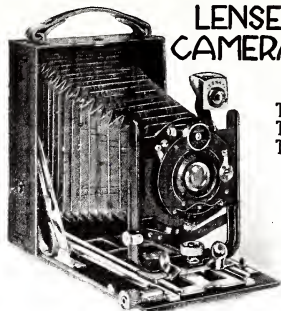


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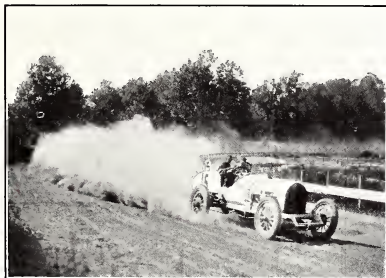
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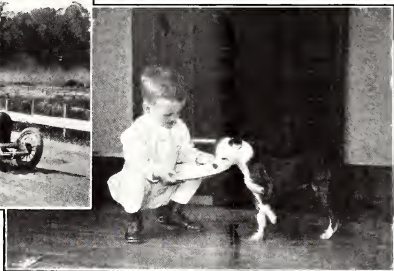
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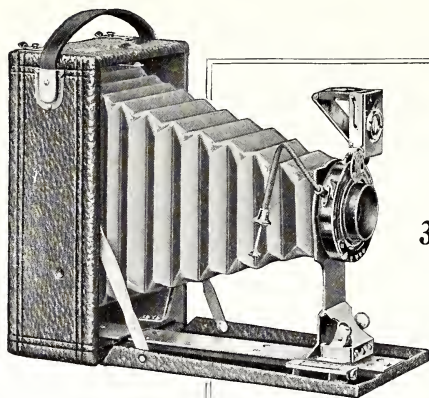


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AND there is no uncertainty. When you look in the focusing hood you see the image, right side up, the size it will appear in the finished picture *up to the instant of exposure*. Finder and focusing scale are done away with. There is no necessity for estimating the distance between the camera and the subject.

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\$10.50

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A remarkably light, compact camera for pictures of the artistic 3A proportion.

Can be carried and used anywhere, and is so easy to operate that anyone who can read the simple instructions that come with the camera, can make first-class pictures from the very start.

To load, merely open back, drop in Premo Film Pack, close back and all is ready. To change films for successive exposures just pull out successive film pack tabs.

This model is fitted with a tested meniscus achromatic lens of the highest quality obtainable. The shutter is the new Kodak Ball Bearing with cable release, and the camera is fitted with two tripod sockets, reversible brilliant finder, and is made throughout of the best of materials, by men who have spent their lives in camera making.

Get the new Premo catalogue—a book that no one interested in photography should be without. It describes the many Premo advantages fully—the daylight loading Film Premos, the Premos that take films or plates with equal facility, the Premo Film Pack and tank developing system. It's free at the dealer's, or will be gladly mailed to any address on request.

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WHEN YOU PACK FOR YOUR VACATION TRIP

Remember to take :

- Kodak Film
- Kodak Film Tank
- Tripod
- Portrait Attachment
- Color Screen
- Flash Sheets
- Film Clips
- Tank Developing Powders
- Kodak Acid Fixing Powder
- Velox and Velvet Green Paper
and Post Cards
- Nepera Solution
- Trays, Printing Frame and
Graduate
- Kodak Magnesium Ribbon
Holder and your Kodak.

That looks like a big list, but you will find it takes very little room when you come to pack up. And there is a good argument why every article should be included if you want to have a real good time and bring home a lot of real good pictures.

Be sure of an ample supply of Kodak films to begin with, especially if your vacation takes you where it is difficult to obtain supplies. Nothing is so disappointing as to run out of films. The thing you cared about most is always sure to turn up, and it's as bad as not having your Kodak.

There is an argument almost if not equally as good for the Kodak Film Tank. I have lost a negative because I forgot to change the focus, and only learned of it when I reached home. That picture was lost to me. But I have made the same mistake, developed my film on the spot and had the opportunity to make the negative over. That one incident was argument enough for me to take my Kodak Film Tank on every vacation.

And the Tripod? Well, of course, you *can* get along without it, but there

are times when it comes in most handy, so why leave it out, especially if it is a Kodak Metal Tripod. It takes up scarcely any room and is indispensable if you wish to make negatives on a dark day when an exposure of one-fifth second or more is necessary.

The Kodak Portrait Attachment is so small it will slip in any part of your outfit, but the work it does is most important. Any object at short range is a subject for the Portrait Attachment, and you will find plenty of interesting things worth photographing, but too small for a satisfactory picture without this little supplementary lens. It's no trouble at all to slip the Portrait Attachment over the lens of your Kodak, and you can make snap shot exposures just the same as you do without it. In using the attachment you must merely be sure the subject is the exact distance from the Kodak lens necessary to give a picture in sharp focus.

The instructions with the Portrait Attachment are very clear, and a convenient way to measure this distance is to have a stick cut just the proper length. You can't very well make a mistake if you measure in this way.

Probably you have never used a Kodak Color Screen. If not, you wouldn't miss it so much, but use one on a landscape where there are beautiful white clouds with a background of blue sky, and you will use it on every such occasion. The blue sky will photograph as dark as it looks, when you use the Color Screen, and the clouds will become a most interesting part of your picture. The Color Screen will give you more natural pictures of flowers and other subjects too—because it makes yellow objects photograph light and blue objects dark, instead of just the reverse, as you have probably found is ordinarily the case.

You may say "why should I take Flash Sheets on a vacation?" That depends, of course. You can make

Eastman Kodak Company

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flash-light pictures out of doors the same as in the house, and night pictures in camp are often very interesting.

Firelight effects are easy to make by arranging a group around the camp fire, pinning a flash sheet to the end of a long stick and burning it in the fire. It is necessary to place one person directly between the camera and the flash, to protect the lens from direct rays of light, but the silhouette of this one figure enhances the picture.

With Kodak Film Clips your films may be hung most any place to dry, a clip at the bottom of the film keeping it straight while drying.

Of course, you must have Tank Developing Powders and Kodak Acid Fixing Powder, the latter answering for fixing films and paper as well. Nepera Solution is for your Velox and Velvet Green Paper and Post Cards—and there is no better developer to be had. Kodak chemicals are always reliable and will give you the best results. They are carefully prepared and have much to do with the success of your picture making.

Be sure to take both paper and post cards. You will want to send post cards to your friends and will need the paper to test your negatives for the proper exposure. The Velvet Green prints by daylight, but develops and fixes just like Velox. The green tone is very appropriate for any outdoor picture where foliage is much in evidence.

Trays, Printing Frame and Graduate make up the printing outfit, and then comes the question of a printing light, since daylight is too strong and too variable for Velox printing.

Twenty cents buys a Kodak Magnesium Ribbon Holder, which can be used anywhere and is equal if not superior to an electric lamp. By an ingenious device, a pressure of the thumb on a disc projects the ribbon from the end of the holder. When held in a flame (a small alcohol lamp is most

convenient) the ribbon will burn, producing an intense white light, the amount of which is determined by the length of the ribbon projecting. In this way the exposure can be accurately measured and any number of prints exposed exactly alike. The holder contains sufficient ribbon for 300 or more exposures.

Don't forget your Kodak.

If you are fortunate enough to own two, and one of them is a Vest Pocket Kodak, by all means don't forget the latter. It is little more trouble than a watch to carry, and you will use it a lot more. Time is of little importance on a vacation, but a Kodak, at the right time, is everything.

Every article in this list will help you to make more satisfactory pictures and to have a more enjoyable vacation.

Flower studies made
with the aid of the KODAK
PORTRAIT ATTACHMENT
are doubly attractive when
colored with VELOX
WATER COLOR STAMPS.

No previous experience is necessary. Just a brush or two and the book of stamps which includes complete instructions and costs but twenty-five cents. Or the complete Velox Water Color Stamp Outfit containing three brushes, book of stamps (12 colors) and mixing palette may be had for seventy-five cents at your dealers.

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THE MINIATURE CAMERA.

A few years ago it was a common thing to see dozens of amateur photographers with their cameras perched on tripods and their heads under the focusing cloths, but Kodak simplicity and convenience have made the old type of camera almost a curiosity. Of course, you see more cameras to-day than you ever did before, but they are usually the compact folding type Kodaks which have so conclusively demonstrated their efficiency the world over.

And now there has come still another type of camera, not to displace the many efficient instruments already in use—but to supplement them in such a practical and convenient way that there will be no need for one to go anywhere without a Kodak tucked away in one of his pockets.

The Vest Pocket Kodak is the little instrument which has already so satisfactorily demonstrated its convenience to thousands of Kodak enthusiasts. You will probably not see so many of these little Kodaks as you have their larger brothers, but it will be because they are usually in their owner's pockets, where they are out of the way but may be produced in an instant when there is an occasion for a picture.

And for this reason, no matter how many cameras you may own—you should also possess a Vest Pocket Kodak. It is so small and smooth that it is pocketed without annoyance, and is instantly ready for business without focusing. But the fact that it is more conveniently carried in a pocket than in the hand appeals most to those who like a Kodak for a constant companion.

It has been said that the Vest Pocket Kodak is "as right as a watch—the very essence of efficiency"—and so it is. It will make pictures, equal in every way to those made with larger cameras, the only difference being in their size. But

the size of the picture is more than made up by the convenience of the Kodak itself and the fact that the little negatives may readily be enlarged to post card size with the Vest Pocket Enlarging Camera without the loss of any of their sharpness or detail. In fact, they seem to gain detail when enlarged to reasonable size.

For average photography the Vest Pocket Kodak fitted with ball bearing shutter and tested meniscus achromatic lens is amply efficient. But for those who wish the microscopic definition and flatness of field of the anastigmat lens with its more perfect optical corrections, the Vest Pocket Kodak is offered this year fitted with the new Kodak Anastigmat lens working at *f*. 8. This makes a most desirable outfit at an exceptionally low price for an anastigmat equipment.

For those who wish the maximum of anastigmat speed, the Vest Pocket Kodak may be had fitted with the Zeiss Kodak Anastigmat lens *f*. 6.9.

The Price

Vest Pocket with meniscus achromatic lens,	
Do., with Kodak Anastigmat lens,	\$ 6.00
Speed <i>f</i> . 8.	12 00
Do., with Zeiss Kodak Anastigmat lens,	
Speed <i>f</i> . 6.9.	22 50

Safe, Inexpensive, Convenient

The KODAK MAGNESIUM RIBBON HOLDER

An ideal printing device for Velox and other gaslight papers. May be used anywhere and is really superior to gas or electric light for accurate printing. Kodak Magnesium Ribbon Holder containing roll of ribbon for 300 or more exposures, 20 cents at your dealers.

The developer that fits—

NEPERA SOLUTION

The chemicals contained in Nepera Solution are carefully compounded in perfect harmony with the chemicals in Velox and similar papers.

That is why Nepera Solution has for years been the choice of the best amateurs and amateur finishers. It produces prints of unusual snap and brilliancy—needs only the addition of water to be ready for use.

When you buy developer, specify Nepera Solution. If inconvenient to carry a liquid developer on your travels, Eastman M. Q. Tubes will be found the developer in dry form most nearly approaching Nepera Solution.

THE PRICE.

Nepera Solution, 4 oz. bottle,	-	-	\$.20
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Eastman M. Q. Tubes, each,	-	-	.05

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At your dealer's.



On every vacation, take a

KODAK FILM TANK

Half the pleasure of vacation picture making is in developing your films on the spot, seeing your results, making your picture story complete. And *more* than half the pleasure of developing in the Kodak Film Tank is in the satisfaction of securing better results.

The experience is in the Tank.

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of a second, use a*

KODAK METAL TRIPOD

Always a necessity for time exposures, often a convenience for snap shots, a tripod must combine light weight and compactness with rigidity to be a helpful convenience rather than a burdensome necessity.

Kodak Metal Tripods are light, compact and rigid—ideal for hand cameras up to 5 x 7. The telescoping legs, of nicked brass tubing, lock automatically when fully extended, a pressure on the top catch automatically releasing the others for closing. A unique feature of Kodak Metal Tripods allows any leg to be removed, should accident or wear necessitate repairs. Your dealer has them.



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Kodak Metal Tripod No. 2	5	13½ inches	49½ inches	25 ounces	3.25
Leatherette Case for No. 0	-	-	-	-	.75
Leather Carrying Case, either style	-	-	-	-	1.50

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